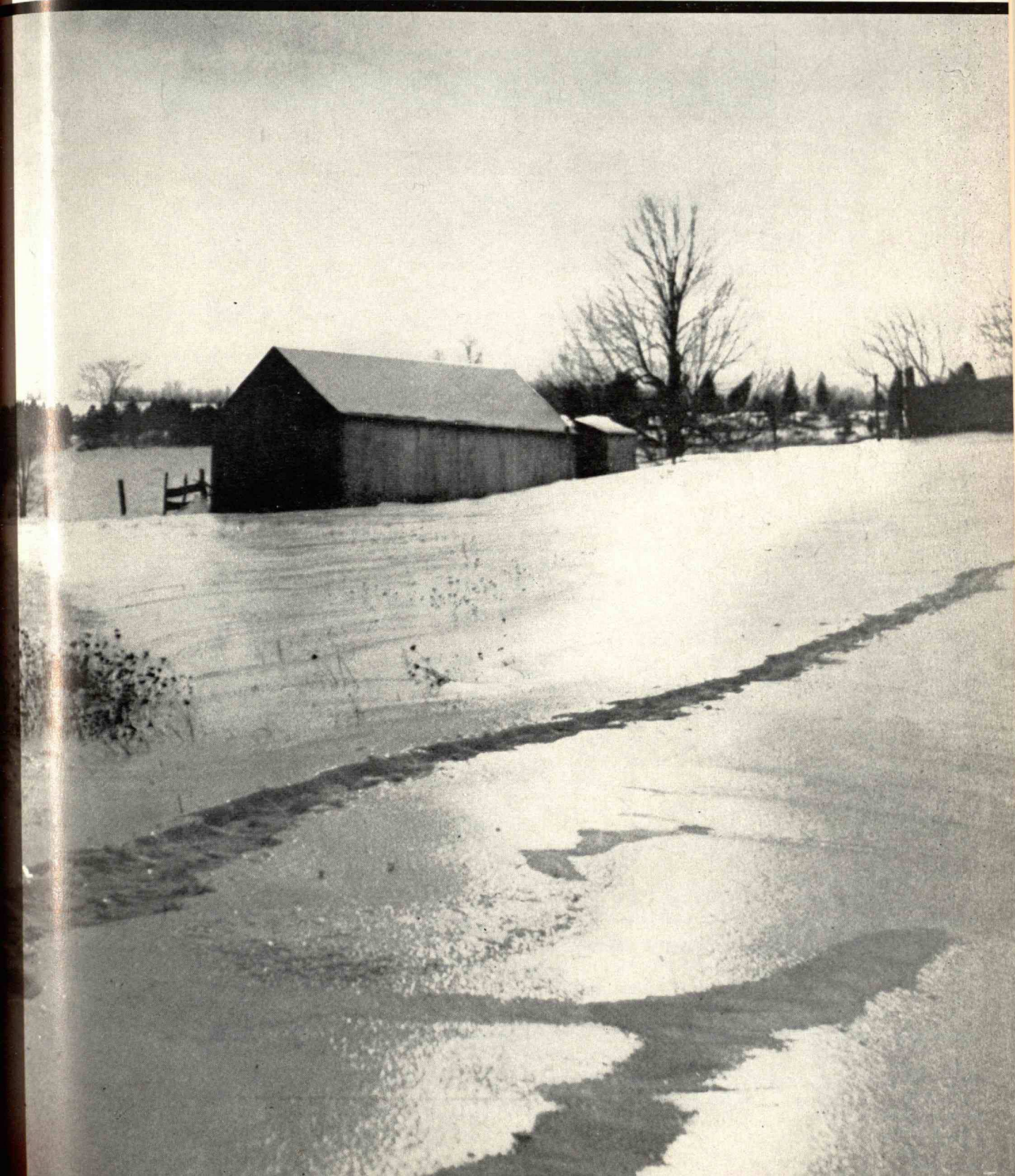


# TECHNOLOGY

## REVIEW

*February 1957*



# technology review

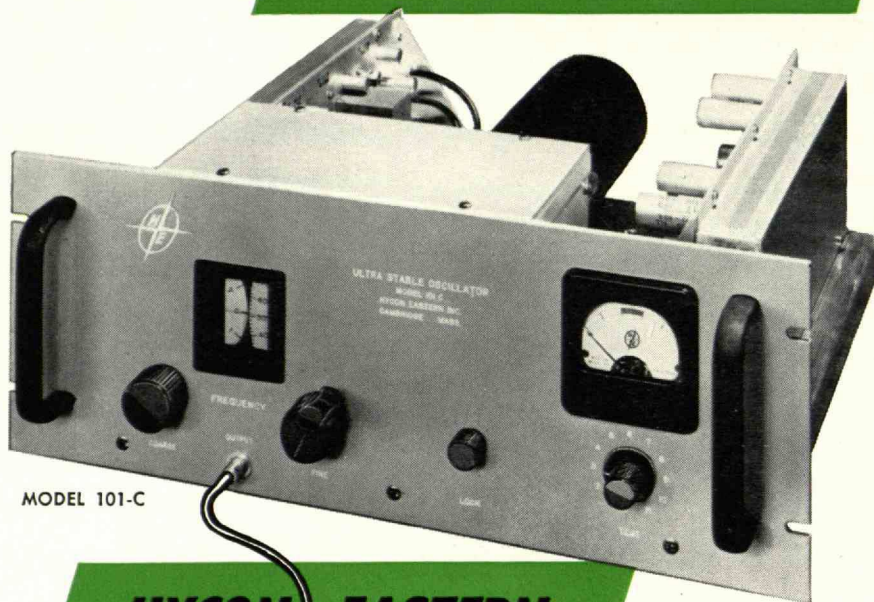
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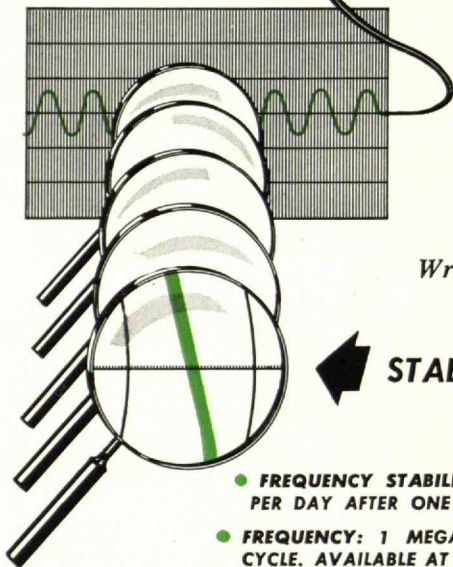
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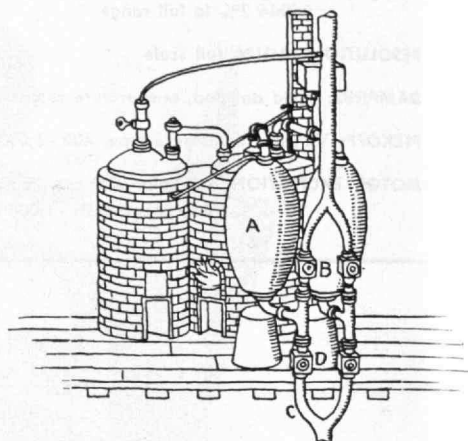
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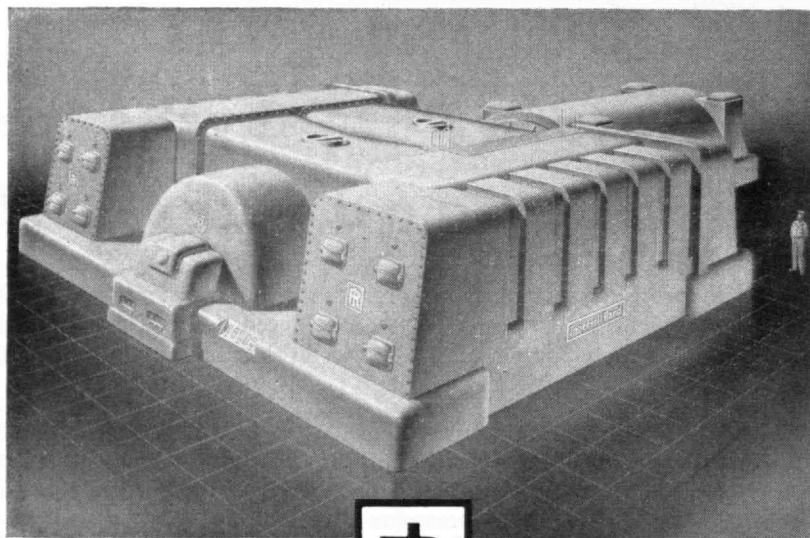
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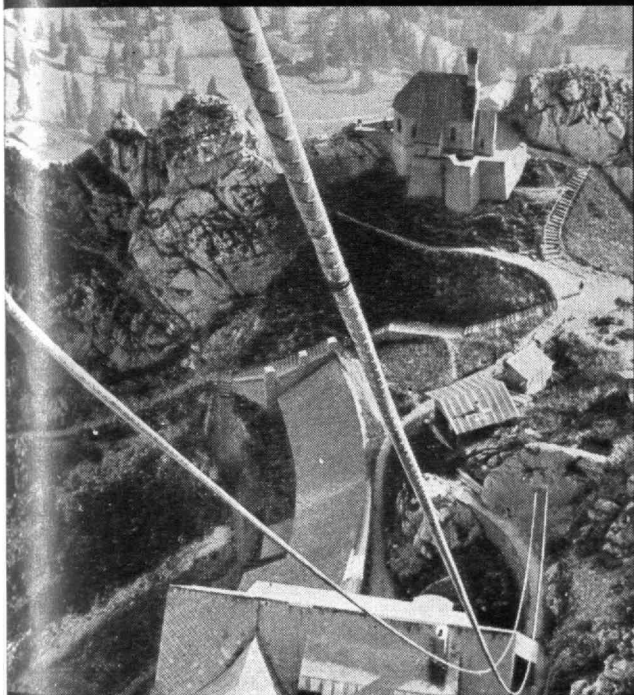
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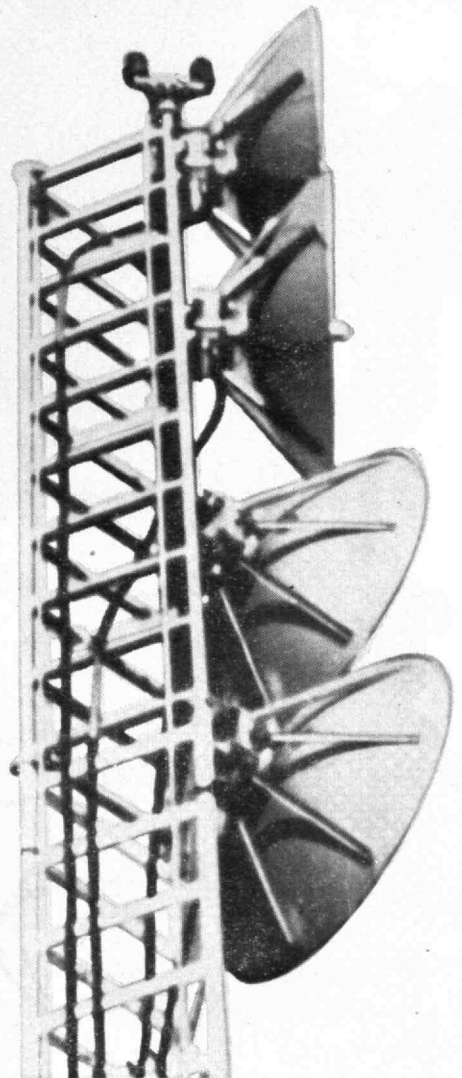
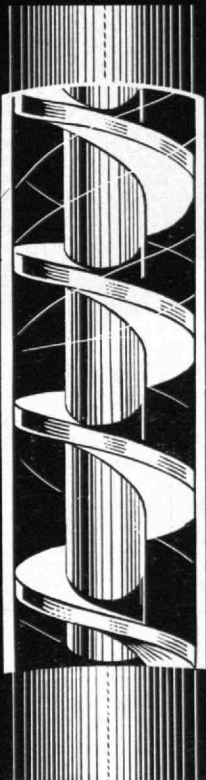
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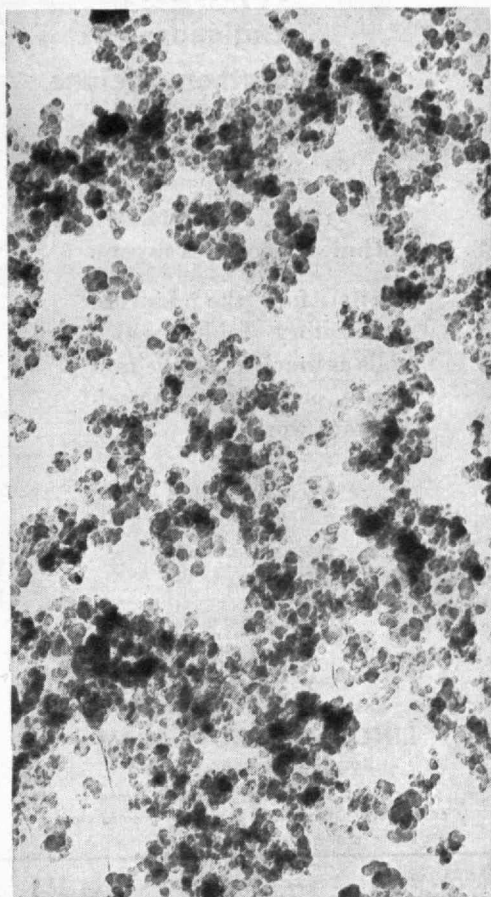
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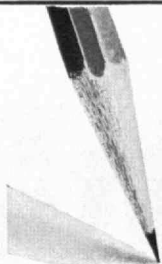


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## THE TABULAR VIEW

**Liberating Creative Energy.**—An industrial society, such as that which much of the Western world has created for itself, makes quite different demands upon its educational system than, let us say, an agrarian society. In "Education for Our Industrial Society" (page 197), WILLIAM R. HAWTHORNE, '39, at the Department of Engineering of the University of Cambridge, examines the type of training that appears to be best suited to Anglo-American needs. Holding that physics and mathematics might well play a more significant role in current training, Professor Hawthorne believes that, whatever subjects are taught, proper instruction, inspiration, and social support are required to raise society to higher levels of achievement so that the creative energies of our people can be released. Text of The Review article is based on the Mollie B. Mandeville Lecture he delivered at Brown University on April 25, 1956, while Professor Hawthorne was Jerome Clarke Hunsaker Professor of Aeronautical Engineering at M.I.T. A native of Benton, England, Professor Hawthorne received the B.A. degree from Cambridge University in 1934 and a year later came to M.I.T. as a Commonwealth Fund Fellow, where he studied fuel engineering and received the Sc.D. degree in 1939. He joined Babcock and Wilcox, in England, as development engineer, working on combustion, heat transfer, and steam generation. From 1940 to 1944 he was scientific officer and head of the Gas Turbine Division at the Royal Aircraft Establishment in Farnborough, and later became deputy director of engine research at the Ministry of Supply (Air) in London. He returned to M.I.T. in 1946 as associate professor of mechanical engineering, and from 1947 to 1951 was George Westinghouse Professor of Mechanical Engineering. Except for his Hunsaker Professorship at M.I.T. in 1955-1956, Professor Hawthorne has been at the University of Cambridge since 1951.

**Soup's On!**—A growing amount of increasingly complex equipment, much of it electrically operated but all of it requiring cleaning, maintenance, and repair, seems to be required in the modern home kitchen. Perhaps it is understandable, therefore, that the modern housewife may have mixed feelings regarding the blessings which the mechanization of the kitchen is supposed to have brought. But mechanization is merely one aspect of the impact technology has had in bringing about a marked change in the home preparation of foodstuffs; certainly the food-processing industry has brought about a drastic revolution in home cooking. In fact—possibly stimulated by the fact that the average family can no longer afford to employ culinary help, even if it could find personnel for hire—the food industry even claims that some of its products include a "built-in maid service." The revolution which technology has wrought in America's kitchens in the past half century is examined (page 201) by HARRY W. VON LOESECKE.

(Concluded on page 184)



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## THE TABULAR VIEW

(Concluded from page 182)

Mr. von Loesecke has spent his professional life in, or closely affiliated with, the food industry and obviously does not share the view that "Science Has Spoiled My Dinner"—to take a title from an article by Philip Wylie in the April, 1954, issue of the *Atlantic Monthly*. After graduation from Harvard University, Mr. von Loesecke became research chemist for the General Electric Company, the American Protein Corporation, and the United Fruit Company. He has also been senior chemist, industrial specialist, and technical adviser in a variety of projects related to agriculture and the food industry. Mr. von Loesecke is a fellow of the American Public Health Association.

**Red Plague.**—As in other articles he has written for *The Review* over the past decade, in this issue (page 204) JAMES A. TOBEY, '15, traces the origin and spread of another of man's maladies. Dr. Tobey shows how modern therapeutics has achieved marked success in the past 10 years in a segment of public health in which laws and education have, unfortunately, made but little headway. Dr. Tobey brings to this article—as to his other writings in *The Review* and elsewhere—a vast knowledge of public health law, and related matters. After having attended the Roxbury Latin School, he received the S.B. degree from M.I.T. in 1916. He went on to take an LL.B. degree from Washington Law School in 1922, an M.S. from the American University in 1923, and returned to M.I.T. for his Dr.P.H. degree which was conferred in 1927. His professional life has been spent in advancing public health and laws affecting it, in lecturing at such institutions as M.I.T., Yale, Harvard, and Columbia universities. He has been associate editor of the *American Journal of Public Health*, has written about 20 pamphlets and more than 100 articles.



Cellulastic Corp., Newark, N. J.  
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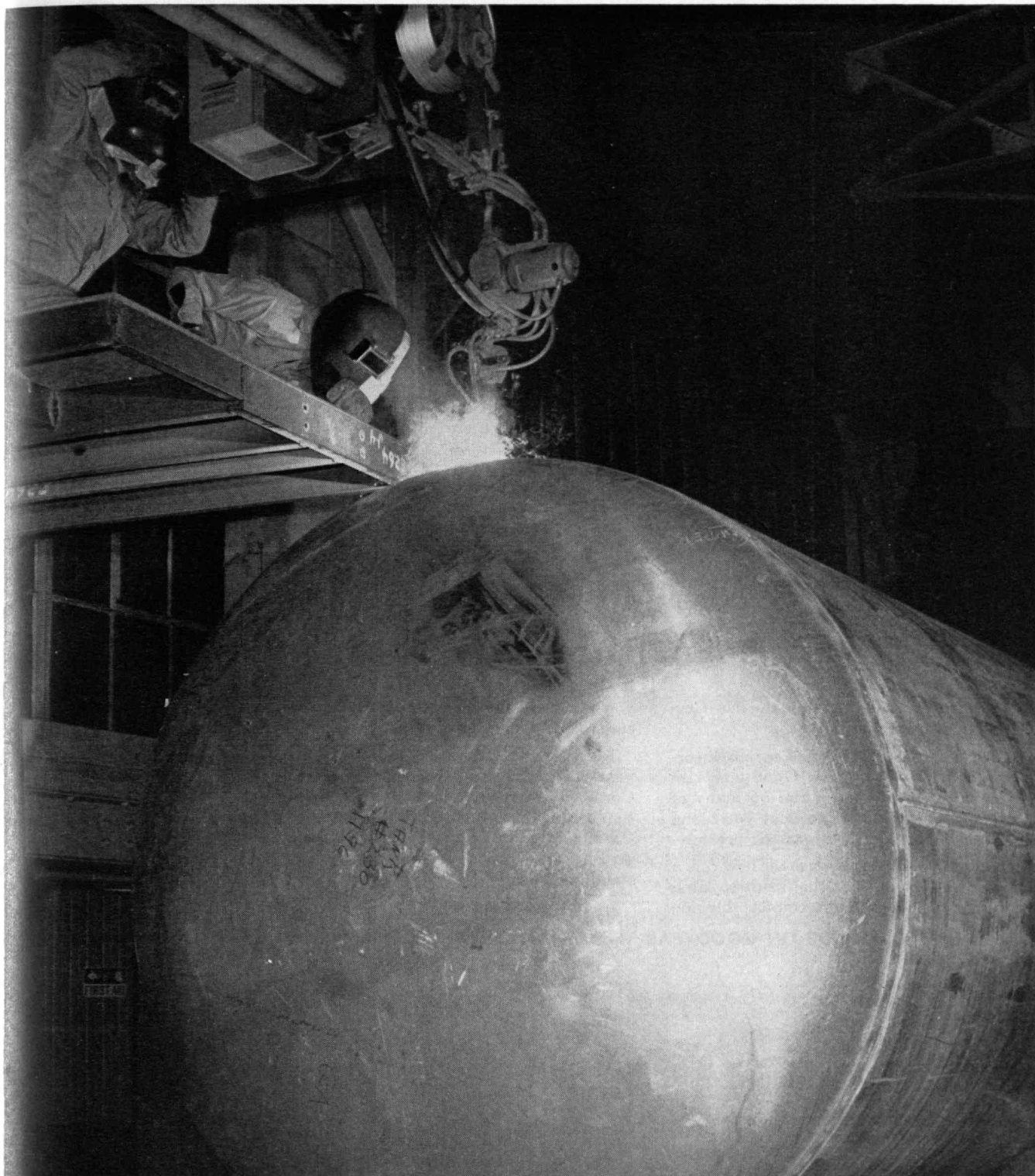
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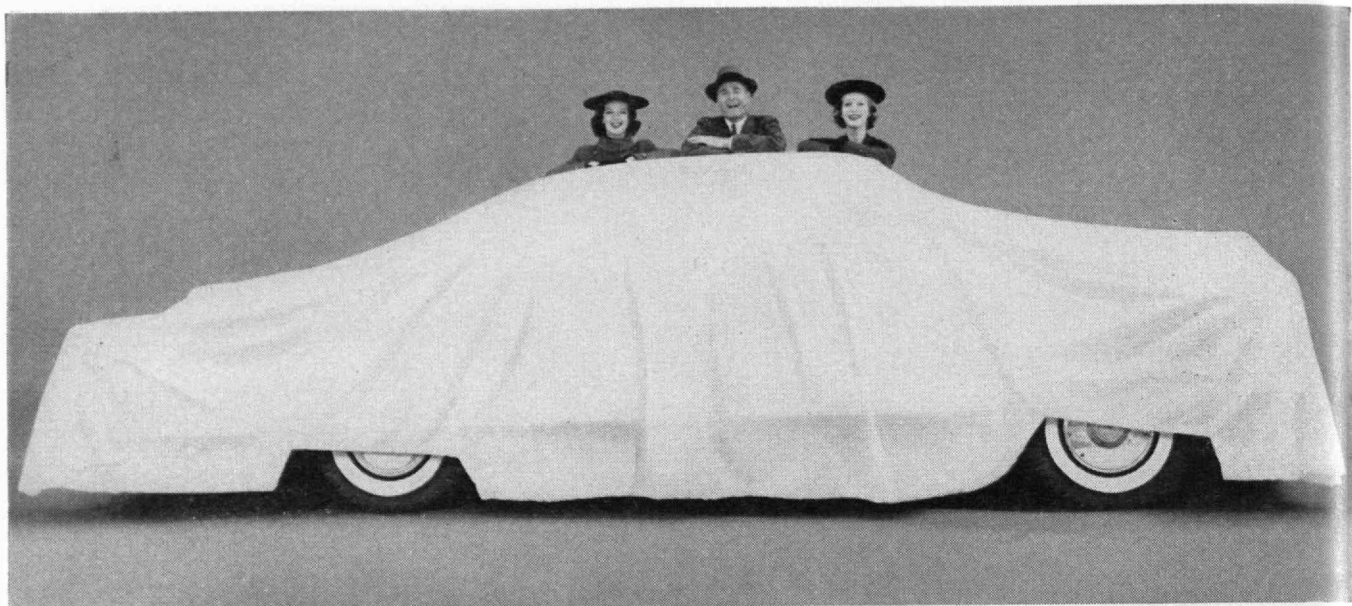
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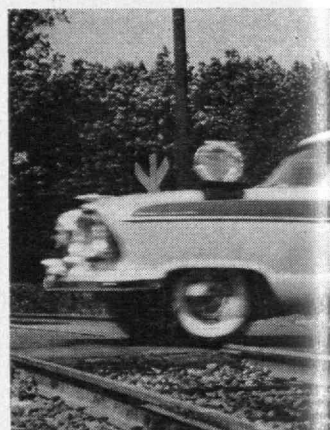
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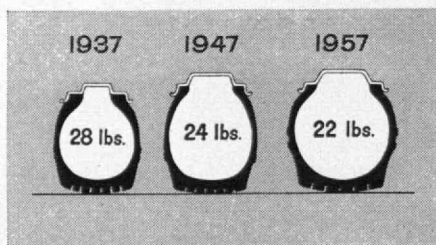
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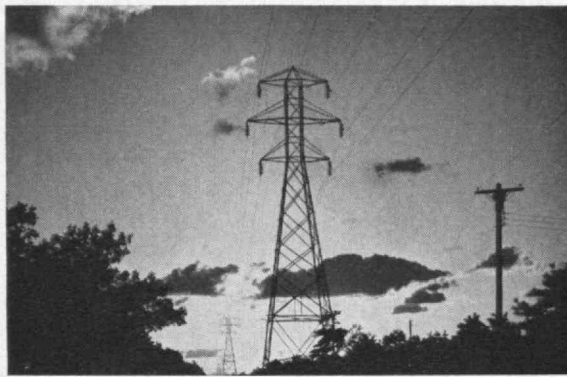


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THE TECHNOLOGY REVIEW



*"Let there be light!"* F. S. Lincoln, '22

# Technology Review

TITLE REGISTERED, U. S. PATENT OFFICE

Edited at the Massachusetts Institute of Technology

VOL. 59, NO. 4

## Contents

FEBRUARY, 1957

### FEBRUARY ..... Front Cover

Photograph by Mrs. Lee A. Ellis

*This typical New England winter scene was one of a group of photographs displayed in the Institute's Photographic Salon*

### BELLAPAIIS ABBEY, ISLAND OF CYPRUS ..... Frontispiece 188

*The unrest which has marked Cyprus in recent months is not depicted in this view made by Professor Shank on a recent vacation trip*

### EDUCATION FOR OUR INDUSTRIAL SOCIETY .... By William R. Hawthorne 197

*A society that depends so largely on the products of its industries needs an educational system that will release the creative energies of its people*

### KITCHEN REVOLUTION ..... By Harry W. von Loesecke 201

*In the past half century, large-scale, food producing and processing methods have wrought a revolution in America's kitchens*

### THE WAKE OF THE RED PLAGUE ..... By James A. Tobey 204

*In arresting one of man's maladies, modern pharmaceuticals have been much more effective than laws and education*

### THE TABULAR VIEW ..... 182

*Contributors and contributions to this issue*

### THE TREND OF AFFAIRS ..... 189

*Relating to the Massachusetts Institute of Technology*

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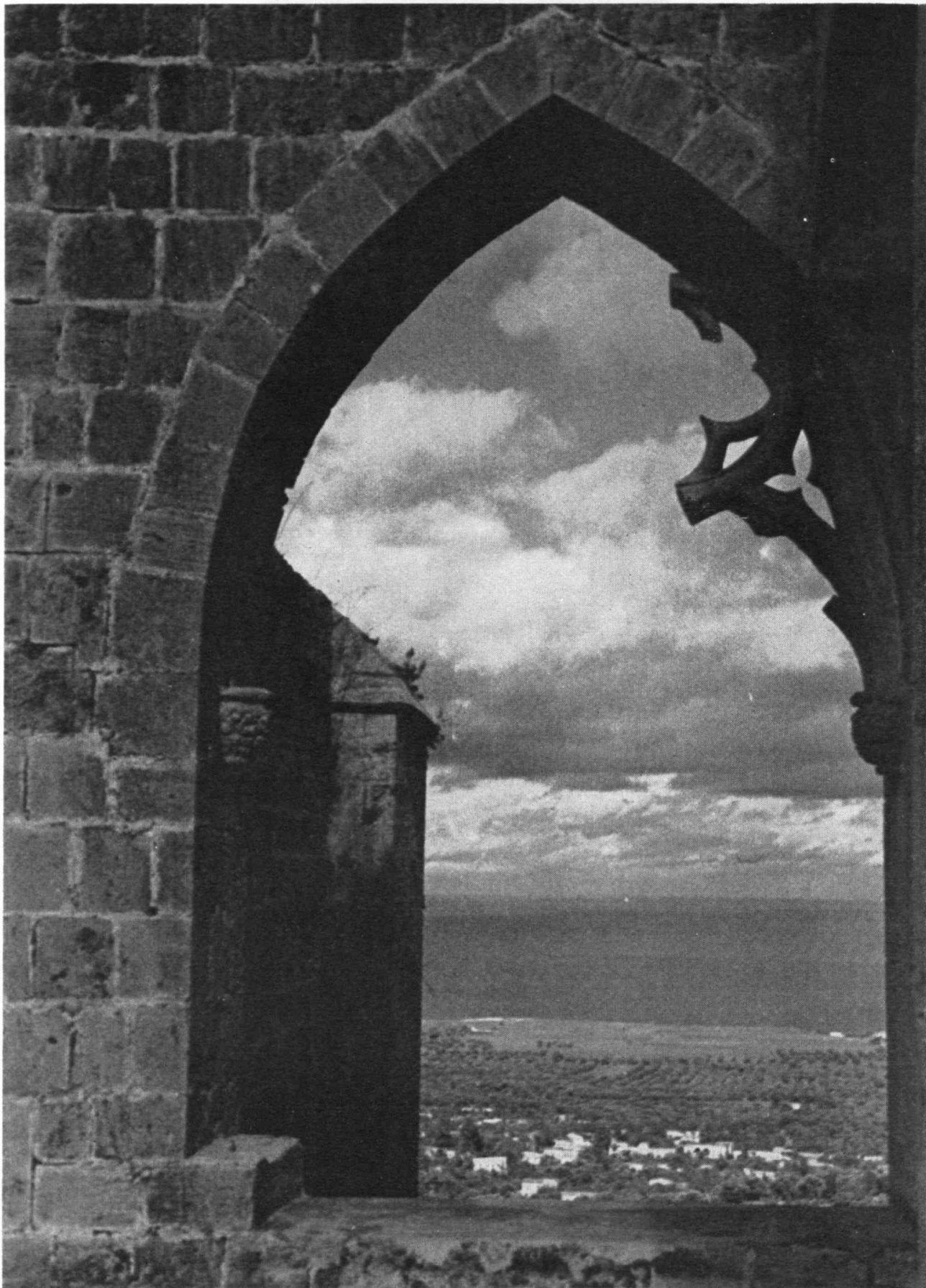
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*Maurice E. Shank, '49*

*Bellapais Abbey — Island of Cyprus*





## The Trend of Affairs

### Discussion Wanted

■ In the pages of *The Review* throughout the past few years, frequent recognition has been given to the growing importance of higher education in the United States and to the need for rapidly improving the nation's facilities for higher education. The interests of *Review* readers in this broad subject naturally tend to converge on professional education in engineering, science, architecture, or industrial management. But the basic problem is broader than the need of professional workers; in its broadest sense it involves the training of all manner of persons whose interests, needs, and abilities run the full gamut of human experience.

Man has come a long way from the days of 1794 when French revolutionary masses had no need for scientists and promptly guillotined Lavoisier. Higher education, on a broad scale, is definitely here to stay. We are coming to recognize that true education lays the foundation for a lifetime of continued intellectual self-improvement and expansion. It is becoming clear that college and university programs, desirable as they are, are not the only ways (and possibly not even the most desirable ways in some instances) of maximizing the intellectual potential of the nation's citizenry. Training to the doctorate level and beyond will certainly be necessary and desirable for some, but many more will reach the limits of their intellectual abilities at a lower level of academic discipline. It is in this area that the trade schools, the junior colleges, normal schools, business colleges, adult educational centers, industry schools, technical institutes, and other educational institutions between the high school and the university levels can play their important roles in training successful citizens.

In the past, "success" was frequently measured by the increased income and the social prestige that were presumed to result from college training. As higher education becomes more generally available, and as taxes exert their economic leveling influences, these economic and social drives may well lose much of their former importance. The present aim of providing schooling to the limit of one's intellectual capabilities, without economic barriers to the really

qualified, is bound to leave its mark. Already it has raised difficult economic problems.

How to pay for modern education is a serious and vexing matter. The days of the ambitious youth who worked his way through college appear to be numbered. Whether we like it or not, the taxpayer will certainly be called upon to pay much of the bill for the nation's schools at all levels of operation.

The revision of the nation's educational system to meet the needs of the Twentieth (or Twenty-first!) Century is not an easy task. Fortunately, however, it is being attacked by many interested persons. One such group is President Eisenhower's Committee on Education Beyond the High School, headed by Dev-ereux C. Josephs, who is chairman of the Board, New York Life Insurance Company. Serving with Mr. Josephs on this awkwardly named committee are three dozen educators and executives, including Crawford H. Greenewalt, '22.

In mid-November, this committee forwarded to President Eisenhower, its "First Interim Report to the President." This report is bound to interest those who recognize the need for a well-integrated national policy on education. Perhaps it will also stimulate discussion on what the nation's policy should be. Indeed, the committee feels that:

"Effective planning for the future will not get started unless there is discussion first. Nor can we be sure that our recommendations will have public approval unless they have been tested out by many people in many parts of the country. Of one thing the Committee is certain: the American people will decide the various kinds of post-high school education they want. It is our function to pose the problems in such form as may be an aid to these decisions."

In taking stock of the present status of education in the United States the committee says:

"It is agreed that (1) the conservation and development of human talent is the proper concern of every citizen, and of the Nation; (2) every individual, regardless of race, creed, color or national origin, shall have the opportunity to develop his or her best self, to continue appropriate education up to his or her personal point of optimum development; and

(3) the assurance of genuine equality of educational opportunity requires that collectively the institutions and agencies responsible for providing this education be characterized by four attributes:

"Quantity . . . there must be a sufficient number of institutions and qualified faculty persons to provide for all qualified students . . .

"Quality . . . the quality of opportunity offered must be good . . . we must find ways of meeting the pressure of numbers without jeopardizing the quality of present educational opportunities . . . indeed educational methods and practices must be made more efficient as rapidly as the technologies of other fields advance if the quality of education offered is to equal the need . . .

"Variety . . . there must be a variety of educational institutions under a diversity of auspices to offer many choices to individuals of various abilities and talents who differ in interests, aspirations, and beliefs . . .

"Accessibility . . . there must be facilities for education which are accessible to all students if equality of opportunity is truly to be realized."

The committee recognizes that, within the next two decades, demands on all phases of education beyond that of high school will be extraordinary. In seeking to crystallize public thinking toward the development of a national educational policy, the committee submits its preliminary considerations. These may be briefly summarized as follows:

"1. Our ideals and the increasing complexity of our civilization require that each individual develop his or her talents to the fullest.

"2. The needs of the individual and of society plus an unprecedented growth in the population of post-high school age will far outrun the present or planned capacity of existing colleges and universities and other post-high-school institutions.

"3. The needs of the oncoming millions of individuals with varying capacities and interests will call for a broader range of educational opportunities, and less rigid time requirements.

"4. Many more able and qualified teachers will be needed than present efforts can provide.

"5. There must be promptly formulated an explicit, considered policy as to the role of the Federal Government in education beyond the high school.

"6. Even with the best possible utilization of existing resources, additional financial support must be provided if the additional millions in the population are to be enabled to develop their talents to the fullest."

Each of the above points is expanded in the "First Interim Report" published by the United States Government Printing Office. The report is offered as a means of stimulating discussion, and perhaps there will be some who object to some or all of its preliminary conclusions. The committee wisely recognizes that a wide range of educational opportunities will be required. The committee holds that: "In the last analysis, the measure of success of an educational system is the extent to which it kindles in an individual a continuing desire and sense of responsibility for self-development and enlarged understandings."

Federal participation in meeting at least some of the costs of post-high-school education is already being demanded. Questions of educational "rights" are certain to pop up if and when higher education is generally supported by taxes and hence becomes available to all who can — or hope they can — qualify. It is one thing to provide free educational opportunities for those who can truly derive benefits from them; it is quite another thing to award Ph.D. degrees automatically to those who have merely lived through 20 years of school attendance. And, in a democracy such as the United States is, we may be sure that much verbiage will be spilled before we emerge with a clear-cut, well-defined, generally accepted policy on national education.

But that is just the point to emphasize! The committee is interested in your views on education and your reactions to its tentative conclusions. It is seeking answers to a host of tremendously difficult problems affecting 168,000,000 United States citizens — and their descendants.

### William C. Potter: 1874-1957

■ William C. Potter, '97, one of the world's foremost bankers and industrialists and an emeritus life member of the M.I.T. Corporation, died in Albany, Ga., on January 2. He was 82 years old.

Former president and board chairman of the Guaranty Trust Company of New York, Mr. Potter started his career as a mining engineer in the West. He extended his activities to Mexico and the Southwest as general manager of the Guggenheim Exploration Company and the American Smelting and Refining Company, and in 1911 became president of the Intercontinental Rubber Company. Soon after he joined the Guaranty Trust as a vice-president, Mr. Potter became a member of Guggenheim Brothers and continued to serve Guaranty Trust as a director and member of the executive committee.

For his World War I service as chief of the Equipment Division of the Army Signal Corps, Mr. Potter won the Distinguished Service Medal. He returned to Guaranty Trust in 1921 as chairman of the board of directors, relinquished that post to be president of the bank for 13 years, and resumed the chairmanship from 1934 to 1941. Mr. Potter was chairman of the bank's executive committee until 1946, when he became a director, and last January was named a director emeritus. He had also held directorships with the Federal Reserve Bank of New York, Anaconda Company, Bethlehem Steel Corporation, Atchison, Topeka and Santa Fe Railroad, and many other firms, and had served as treasurer and trustee of the Juilliard Musical Foundation. He was among the financial and industrial men who conferred with Presidents Herbert Hoover and Franklin D. Roosevelt concerning the restoration of confidence in the country during the Depression and the changes in laws affecting banks and the stock market when the New Deal was in power.

Mr. Potter is survived by two daughters, Mrs. Jean P. Allen of Southampton, Long Island, and Mrs. Charlotte P. Jennings of New York, and a granddaughter.

## Twenty-five Years Ago This Month . . .

■ On February 6, 1932, at the Hotel Statler there took place the 57th Annual Alumni Dinner with Bradley Dewey, '09, the Association's 38th President, as toastmaster.

"Impelled by a warm fellowship and by a strong sense of loyalty," in the words of the then Editor of *The Review*, James R. Killian, Jr., '26, "to what might be better called their *almus pater*, graduates of M.I.T. instituted in 1876 the first Alumni Association Dinner. It was celebrated at Young's, and those of a total Alumni body of 122 who were present elected Robert H. Richards, '68, President of the Association. From then until now that initiatory dinner . . . has been repeated yearly and elaborated with a zeal that has suffered no diminution. It has grown to be an outward manifestation of an inner unity between the Institute and its Alumni, an occasion for demonstrating and cultivating a productive interrelationship.\*

"After the dinner," Editor Killian continued, "there were two scientific demonstrations and two speeches, in addition to the presentation of honorary membership in the Association to Mrs. Ellen King and a formal accolade to Professor James R. Lambirth.

"The first scientific item was in charge of Professors R. D. Bennett and B. E. Warren, '24 . . . and it consisted of a demonstration of Geiger counters. . . . Perhaps the most spectacular part of the demonstration was the loud clicks which were heard by the entire audience and which were produced by the mysterious cosmic rays which scientists are now trying so hard to explain. The second scientific experiment was that of the Van de Graaff 1,500,000-volt generator . . . operated and described by Professor Vannevar Bush, '16, and Mr. E. S. Lamar."

Between the two demonstrations Dr. Allan Winter Rowe, '01, spoke on undergraduate activities, and after the second came the address of the evening, by Dr. Compton on the educational objectives of the Institute. Of these he said: "There are two, and I think only two. One is the training of our students to understand and be adaptable in the world in which they live. The other is the application of science to human welfare through the advancement and application of knowledge, and the training of experts. . . . I would say that M.I.T. has been in the past, and can be even more in the future, a cultural and economic asset of far-reaching significance to this community, to this country, and to the world."

\* For 20 years the Association continued to dine annually at Young's Hotel, the site of which was adjacent to Thompson's Spa and Pie Alley; then five successive dinners took place at the old Exchange Club, near Post Office Square. During the first eight years of the new century, the Alumni went across Boylston Street from Old Rogers to the Hotel Brunswick, since which time other Boston hotels have been favored as follows: the Somerset, six times; the Copley Plaza, thrice; and the Statler, twenty-one times.

The setting for the dinner of 1909, to greet the Institute's new sixth President, Richard C. Maclaurin, was Horticultural Hall, Boston; for that of 1913 it was the Hotel Plaza in New York. The first of the 10 dinners in Walker Memorial was in 1918; on the occasion of the first and second Alumni Days, in 1935 and 1936, the dinners were held in Symphony Hall.

On June 11, 1956, the 81st Annual Dinner of the Alumni Association was held in Rockwell Cage as the closing event of the 22d Alumni Day program.

## On the Horizon

**February 16, 1957** — 10th M.I.T. Alumni Regional Conference, Chicago, Ill. **Theme:** "New Horizons for Industry — M.I.T. Mid-America Conference." **Speakers:** President Killian; Deans E. P. Brooks, '17, and Pietro Belluschi; Professors Walter G. Whitman, '17, and John E. Arnold, '40; Allen W. Dulles, Director, U.S. Central Intelligence Agency. (For further information, consult John R. Kirkpatrick, '48, Arthur D. Little, Inc., 9 South Clinton Street, Chicago 6, Ill.)

**February 22-25, 1957** — "M.I.T. Week End in Havana," M.I.T. Club of Cuba. (For reservations, consult Antonio Helier Rodríguez, '21, Concordia 61, Havana, Cuba.)

**March 7, 1957** — M.I.T. Club of New York — Dinner at Longchamps Restaurant, 42d and Lexington Avenue, 7:00 P.M. **Speaker:** Eger V. Murphree, '23, Special Assistant to Secretary of Defense. Mr. Murphree will speak on "Guided Missiles." (For further information, consult Anton E. Hittl, '36, M.I.T. Club of New York, 33 East 48th Street, New York 17, N.Y.)

**March 14-16, 1957** — 9th Annual Fiesta, M.I.T. Club of Mexico, Mexico City, D.F. (For reservations, consult Clarence M. Cornish, '24, Margaritas 139, Villa Obregon, Mexico 20, D.F., Mexico.)

**June 10, 1957** — 23d Alumni Day, 1957, M.I.T. Campus in Cambridge.

**September 6-7, 1957** — 2d Alumni Officers' Conference, M.I.T. Campus in Cambridge.

**December 7, 1957** — 11th M.I.T. Alumni Regional Conference, Pittsburgh, Pa.

Following Dr. Compton's remarks, President Dewey announced the conclusion of the evening's festivities in his long-to-be-remembered and distinctly pronounced words: "The Alumni will now rise and sing the Sein Song."

. . . In tryouts held at Walker Gymnasium on February 10-11, Joseph L. Levis, '26, qualified as a member of the U.S. team for the 1932 Olympics at Los Angeles where he took *second* in the individual foils competition.

. . . Congratulations were being extended also to Major James H. Doolittle, '24, as winner of the Bendix Trophy at the National Air Races for covering the 2,046 miles separating Burbank, Calif., and Cleveland, Ohio, at an average flying speed of 223 miles per hour.†

† The 1956 Bendix Trophy was won by Captain Manuel J. Fernandez, Jr., U.S.A.F. by covering 1,120 miles from George A.F.B., Calif., to Oklahoma City, Okla., at an average of 666.661 miles per hour, thereby setting a new record.



## Individuals Noteworthy

■ Year-end news included the 17 promotions, elections, or appointments which follow:

*Ralph T. Walker*, '11, as Chairman of the Board of Trustees, New School for Social Research . . . *Luis R. Gonzalez*, '12, as a Director of Cia. Financiera de Inversiones, Inc., of San Juan, Puerto Rico . . . *Everett S. Coldwell*, '15, as a Trustee, Roosevelt Hospital, New York;

*Edwin E. Aldrin*, '17, as Vice-president, Institute of the Aeronautical Sciences . . . *Walter J. Beadle*, '17, as a member of the Advisory Board on International Business, Chemical Corn Exchange Bank, New York . . . *Walter G. Whitman*, '17, as General Chairman, 1957 Nuclear Congress, Philadelphia;

*Albert L. Edson*, '21, as a member of the Massachusetts Airport Management Board . . . *Robert J. Hull*, '23, as President, Cities Service Oil Company, Ltd., Toronto, Ont. . . . *Edward J. Hanley*, '24, as a Director, Mellon National Bank and Trust Company, Pittsburgh;

*James R. Killian, Jr.*, '26, as a Trustee, Carnegie Foundation for the Advancement of Teaching . . . *Sidney L. Kaye*, '30, as First Vice-president, Parker Hill Medical Center, Boston . . . *Paul F. Genachte*, '33, as Director of the Atomic Energy Division, Chase Manhattan Bank, New York;

*Roland D. Glenn*, '33, as General Manager — Vinyls, Bakelite Company, Plastics Division of Union Carbide and Carbon Corporation . . . *Maxwell D. Millard*, '33, as General Manager of Sales, American Steel and Wire Division, United States Steel Corporation . . . *John H. Colby*, '35, as Vice-president and General Sales Manager, Johnson Service Company, Milwaukee;

*Lincoln Paige*, '35, as Vice-president, Empire Trust Company, New York . . . *Semon E. Knudsen*, '36, as General Manager, Pontiac Division, General Motors Corporation.

■ Recent special honors came to Alumni and members of the Institute Faculty as enumerated below:

To *Robert J. King*, '03, an honorary doctor of science, by Piedmont College, Demorest, Ga. . . . *Vannevar Bush*, '16, honorary fellowship of the American College of Surgeons;

To *Howard W. Green*, '16, a citation for his contributions to the development and use of statistics in census enumeration, by the American Statistical Association . . . *Edward P. Warner*, '17, a 1956 F.S.F. Award, by the Flight Safety Foundation, Inc.;

To *Julius A. Stratton*, '23, its 1957 Medal of Honor "for his inspiring leadership and outstanding contributions to the development of radio engineering as a teacher, physicist, engineer, author, and administrator," by the Institute of Radio Engineers;

To *Howard R. Batchelder*, '28, its Award of Merit, by the American Gas Association Operating Section . . . *William H. Radford*, '32, and *Milton C. Shaw*, M.I.T. Professors, respectively, of Electrical Communications and Mechanical Engineering, alumni citations for showing "that sense of enterprise and civic responsibility that gives strength and purpose to our free way of life . . ." by Drexel Institute of

Technology on the occasion of its 65th Anniversary Convocation;

To *R. B. Woodward*, '36, an honorary doctorate of science, by Yale University . . . *José M. Bosch Aymerich*, '46, first prize in architecture, by Spain's 1956 Bienale Hispano-Americana . . . *George R. Harrison*, Dean of the Institute's School of Science, the first Pittsburgh Spectroscopy Award, by the Spectroscopy Society of Pittsburgh.

## 75 Years of The Tech

■ In celebration of three quarters of a century of service to Technology, the managing board of *The Tech*, with *John A. Friedman*, '57, as editor, and *Robert G. Bridgham*, '57, business manager, has published a 12-page souvenir issue of this newspaper, dated December 20, 1956. The first page of this unusual issue contains a large photograph of the main entrance to Building 10 and part of the Great Court as it appears today. On page 2 we find a facsimile of a letter of congratulation to the editors and staff of *The Tech* from President *James R. Killian, Jr.*, '26, and, by way of comparison, a list of the original staff together with the names of current staff members. In addition, two points of view on college newspapers are expressed; one from an editorial taken from the first issue of *The Tech*, and the other an expression of views of the present staff.

The remaining 10 pages of the souvenir issue are given over to an historical résumé of Technology affairs as recorded in earlier issues of *The Tech*, whose first issue appeared in mid-November, 1881. *The Tech* has been published ever since and today is the oldest extracurricular activity of the student body.

The pages of this special issue of *The Tech* recall the establishment of M.I.T. by *William Barton Rogers*, and summarize important M.I.T. events prior to 1881 when the student publication was initiated by *Harry W. Leonard*, '83, *Henry F. Ross*, '82, *Isaac W. Litchfield*, '85, and *Walter B. Snow*, '82. Other eras in Technology's history are treated under the headings: "1881-1888: Life Begins at Eighty-One," "1889-1897: Struggle Brings Satisfaction," "1898-1909: Years of Confident Expansion," "1910-1918: A Change of Address," "1919-1928: New Ideas Create New Spirit," "1929-1939: Expansion Despite Depression," "1940-1949: Measure of Stature," and finally, "1949-1956: Procession to Prominence."

Throughout its seven and one-half decades of service to M.I.T. students, Faculty, and Administration, *The Tech* has faithfully reported "all the news that's fit to print"; it has editorialized on many topics; it has been instrumental in presenting the students' views on Institute matters; it has taken up the cudgels for many Technology reforms. However, it has not explained why this venerable publication is stoutly to be known as *THE Tech*. But, after one has passed the Biblical age of "three score and ten years," perhaps quibbling over the relative emphasis of an article and a noun is a detail of no great importance.

And so — with a mere 59 years of continuous editorial service to its credit — the relatively young and chipper Technology Review salutes its older brother, along with the able staff who produced the 75th anniversary number of *The Tech*.

## Magnetic Tape Recording

■ Magnetic tape recording is used extensively in many fields for the recording and reproduction of experimental data. For many applications, the small amounts of amplitude fluctuation and time error (flutter) encountered in conventional data recorders can be tolerated. In applications requiring an unusually high degree of accuracy in recording and reproducing amplitude and phase information, however, severe restrictions are placed on the types of data storage and playback facilities that can be utilized. Some reduction in time errors has been achieved with special data recorders. Tape recording offers so many advantages that additional efforts to reduce time errors are well warranted.

The usual specifications for tape recorders are based on measurement procedures which include frequency components up to about 300 cycles per second. A recent investigation, conducted at the M.I.T. Acoustics Laboratory, shows that flutter effects at higher frequencies may be even greater than those observed by conventional techniques. This investigation was initiated by F. Mansfield Young, '48, and conducted by Roger H. Prager, '55, of the Division of Sponsored Research, with the assistance of Gabriel Farrell, Jr., of the D.S.R. staff and Robert M. Stein, '59, a student in the Department of Electrical Engineering. The work, in the Institute's Acoustics Laboratory, was sponsored by the Bureau of Ships, Department of the Navy.

The Axis Crossing Interval Meter (ACIM), developed in the Acoustics Laboratory, has been used for flutter measurements. This instrument is an FM discriminator which produces an output voltage proportional to the time intervals between the zero values of an alternating signal. Flutter was measured in terms of fluctuations in time intervals upon playback of a periodic recorded signal.

The Ampex Model 3078 dual-channel data recorder, widely used in technical applications, was used in this study. Broadband measurements of total flutter, using the axis crossing interval meter, yielded the data in the left-hand portion of the diagram. Even the broadband measurement is well within the manufacturer's specification up to 4,000 cycles per second.

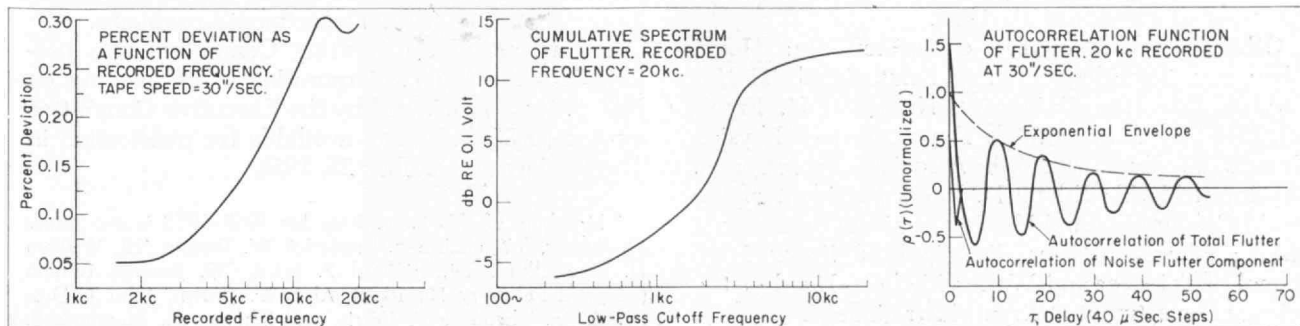
The center graph shows a typical cumulative spectrum of the flutter, measured with a variable low-pass filter at the output of the ACIM. The results indicate that the flutter consists of two components: (1) a broadband effect causing the spectrum to in-

crease gradually, and (2) a relatively narrow band component causing a sharp rise in the vicinity of 3,000 cycles per second. The former is the result of background noise superimposed on the recorded test signal by recording and playback processes. The narrow band component arises from a mechanical vibration which introduces relative motion between the tape and the heads.

Since flutter is observed as fluctuations in the time scale of the recorded signal, the study of flutter is greatly aided by use of statistical methods. The statistical properties of fluctuating signals have been studied extensively during recent years. Of particular interest for such a signal is the degree to which the fluctuations in two samples of the signals remain consistent as the samples are taken further and further apart in time. Such a property is measured quantitatively by the autocorrelation function of the fluctuations.

The autocorrelation function of the flutter has been used to obtain more detailed information about its components. A typical autocorrelation function, shown in the right-hand part of the diagram, is the sum of an exponentially decreasing cosine component (arising from vibrational flutter) and an additional component (arising from noise flutter). The composite function shown for the total flutter was obtained for a high recording level. At low levels, the autocorrelation function takes on the shape shown for the noise flutter component. The frequency and bandwidth of vibrational flutter can be measured from the frequency and decay of the cosine component in the autocorrelation function. The center frequency of the vibration is found to be roughly 2,700 cycles per second and the bandwidth is about 200 cycles per second.

Vibrational flutter is usually attributed to longitudinal vibration in an unsupported length of tape as it moves past the recording and playback heads. Comparative measurements between the two channels of the recorder demonstrated conclusively that the vibration is longitudinal with respect to direction of the tape motion but the results suggest that the vibration is probably in the heads themselves rather than in the tape. The vibration frequency appeared independent of mechanical properties of the tape. Both record and playback heads have resonances at 2,700 cycles per second, but they also exhibit other resonances that do not show up in flutter measurements. Further study is required to determine the excitation mechanism which selects this particular resonance.





## New Approach to Science Teaching

■ During a three-day conference at M.I.T. from December 10 to 13, leading scientists and secondary school educators inaugurated a program which they hope will result in new teaching effectiveness and attracting more young people to the crucial field of science. Representatives of Harvard University, California Institute of Technology, Cornell University, the University of Illinois, and Bell Telephone Laboratories joined with M.I.T. Faculty members and secondary school educators in the project. A new approach for the teaching of high school science is being sought with the support of a grant of \$303,000 by the National Science Foundation to the Institute.

In announcing the grant in Washington on December 10, Alan T. Waterman, Director of the National Science Foundation, said: "The Foundation has long realized the need of teachers of secondary school science for better textbooks, better materials, better instruction techniques. Teachers need up-to-date tools to do a competent teaching job. We believe, however, that we must make a broad attack on the problem, rather than approach it on a bits-and-pieces basis."

New laboratory equipment, films, textbooks, and even do-it-yourself laboratory kits for experiments at home are to be considered as possible means of exciting greater enthusiasm for science, especially in high schools where courses in physics and chemistry have begun to languish. But, according to Jerrold R. Zacharias, M.I.T. Professor of Physics, who is chairman of the Physical Science Study Committee organizing the project, the primary consideration is the question of what should be taught. Physics and chemistry are not static subjects and should be taught in a way that will enable students to comprehend exciting new developments, he explained.

James R. Killian, Jr., '26, President of M.I.T., said: "It is now becoming recognized that the current fashion of blaming the shortage of scientists on the shortage of competent teachers in the secondary schools is not a wholly adequate explanation.

"Secondary school teachers and college teachers of science and mathematics must join forces to devise new courses, new texts, new teaching aids which will eliminate outmoded concepts, inadequately defined units, lack of coherence and which, instead, will provide both teachers and students with more penetrating and richer scientific content."

The group includes Vannevar Bush, '16, retired President of Carnegie Institution of Washington, who is now at M.I.T., and two Nobel Prize winners — I. I. Rabi of Columbia University who is a visiting professor at M.I.T. this year, and Edward Purcell, Professor of Physics at Harvard.

Other members of the committee are: Henry Chauncey, President of the Educational Testing Service, Princeton University; Nathaniel H. Frank, '23, Head of the Institute's Department of Physics; Francis L. Friedman, '49, Associate Professor of Physics at M.I.T.; Edwin H. Land, President of Polaroid Corporation and Visiting Institute Professor at M.I.T.; Morris Meister, Principal of Bronx High School of Science; and Walter Michels, Head of the Science Department at Bryn Mawr College.

## Visiting Committee Report on Humanities

■ Members of the Visiting Committee on the Department of Humanities\* met at Cambridge and Boston for an all-day meeting on Saturday, March 3, 1956. Present for the Committee were Messrs. Barker, Brown, Desmond, MacCallum, Mendenhall, Price, and Chairman Barker. Both Robert M. Kimball, '33, Secretary of the Institute, representing the Institute Administration, and Professor Howard R. Bartlett, Head of the Department, were present throughout.

The morning session and part of the afternoon were devoted to presentations by 12 senior Faculty members of the Department who spoke on their individual responsibilities for the curriculum. All Faculty members of the Department joined the Committee for luncheon at the Faculty Club. An executive session of the Committee (with Professors Bartlett and Edward N. Hartley, Associate Professor of History) in the afternoon gave an opportunity for the Committee to discuss the work of the Department and its problems in substantial detail. The senior Faculty members of the Department, together with John E. Burchard, '23, Dean of the School of Humanities and Social Studies, and Mr. Kimball, dined with the Committee at the Algonquin Club in the evening, which afforded opportunity for further discussion.

The Committee feels that satisfactory progress is being made by the Department, and takes this opportunity of reaffirming its previous judgment as to the desirability of Course XXI in the Institute's curriculum. The Institute Administration and the Department are fully conscious of the fact that this Course needs a descriptive name in addition to its Roman numeral designation. The Committee believes that this is a matter of substantial importance, although it was unable to make a satisfactory suggestion.

After the very thorough review of the work of the Department (made possible by the co-operation of the Faculty members who met with it), the Committee is unhesitatingly unanimous in stating its conviction as to the importance of the Humanities Department in the training of M.I.T. men if they are to take their rightful places in the dynamic world of the present age. With the increasing complexity of this civilization and its problems, specialized engineering and scientific training must be supplemented with such broadening and humanistic studies as are presented by this Department.

The Committee wishes to express its appreciation of the time and effort which Professor Bartlett and his associates gave unstintingly to the Committee in its consideration of the Department's problems.

The report of the Visiting Committee was presented to the M.I.T. Corporation at its meeting on June 8. It was reviewed by the Executive Committee on August 30 and made available for publication in The Review on October 25, 1956.

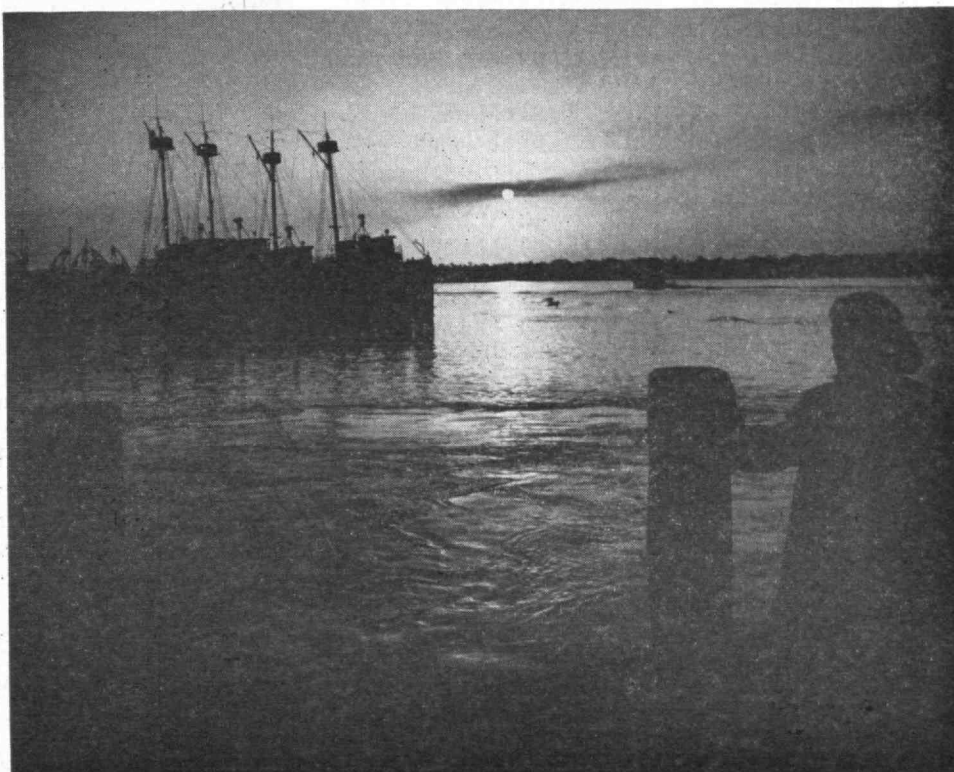
\* Members of this Committee for 1955-1956 were: James M. Barker, '07, chairman, Frederick W. Barker, '12, William H. MacCallum, '24, Richard P. Price, '25, Jacques Barzun (resigned February 16, 1956), Alan W. Brown, John J. Desmond, Jr., Theodore P. Ferris, and Thomas C. Mendenhall.

# Calendar of Technology Sports

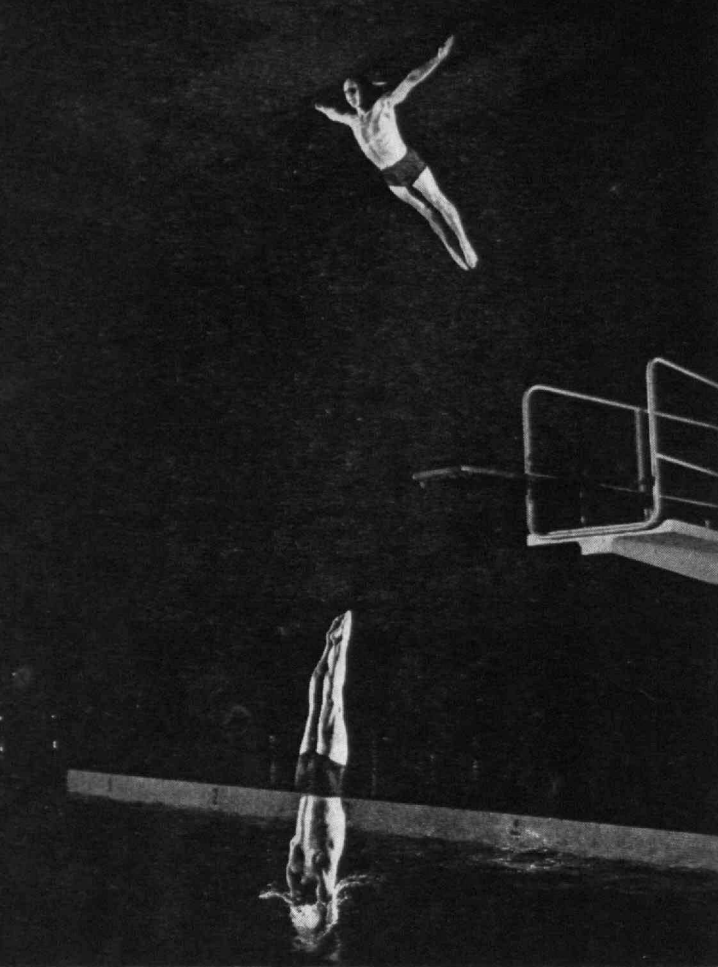
Date	Time P.M.	Event	M.I.T. Playing	At	Date	Time P.M.	Event	M.I.T. Playing	At
Feb. 5	4:00	Vars. Squash	Harvard	M.I.T.	Feb. 20	7:30	Vars. Swimming	Brown	Brown
Feb. 6	6:30	JV Basketball	Wesleyan	Wesleyan	Feb. 20	8:15	Vars. Basketball	Northeastern	M.I.T.
Feb. 6	7:30	Vars. Fencing	Bradford	M.I.T.	Feb. 21	7:00	Frosh Swimming	Brown	M.I.T.
			Durfee		Feb. 22	2:00	Vars. Fencing	Holy Cross	M.I.T.
Feb. 6	8:15	Vars. Basketball	Wesleyan	Wesleyan	Feb. 22	4:00	Vars. Hockey	Colby	M.I.T.
Feb. 9	2:00	Vars. Fencing	C.C.N.Y.	C.C.N.Y.	Feb. 22	8:45	Vars. Basketball	Pratt	Pratt
Feb. 9	3:00	Vars. Hockey	U. of Mass.	U. of Mass.	Feb. 23	2:00	Vars. Hockey	Alumni	M.I.T.
Feb. 9	2:00	Vars. Swimming	Coast Guard	M.I.T.	Feb. 23	2:00	Vars. Squash	Amherst	M.I.T.
Feb. 9	3:00	Vars. Wrestling	Boston U.	M.I.T.	Feb. 23	2:00	Frosh Squash	Amherst	M.I.T.
Feb. 9	8:30	Vars. Basketball	W.P.I.	W.P.I.	Feb. 23	2:00	Vars. and Frosh Indoor Track	U. of N.H.	M.I.T.
Feb. 10		Skiing	N.E. College	Manchester, Vt.	Feb. 23	3:30	Vars. Wrestling	Albany State Teachers	A.S.T.
			Trophy		Feb. 23	8:30	Vars. Basketball	Stevens	Stevens
Feb. 12	7:15	Vars. Swimming	U. of Mass.	M.I.T.	Feb. 24		Skiing—	Foley	Franconia, N.H.
Feb. 13	3:00	JV Squash	Middlesex	M.I.T.				Memorial	
Feb. 13	3:00	Frosh Swimming	St. George	St. George	Feb. 27	3:30	Vars. Swimming	Springfield	Springfield
Feb. 13	4:00	Frosh Hockey	Lawrence	M.I.T.	Feb. 27	4:00	Frosh Squash	Andover	M.I.T.
			Acad.		Feb. 27	6:30	Frosh Basketball	Tufts	Tufts
Feb. 13	4:00	Frosh Wrestling	U. of Mass.	U. of Mass.	Feb. 27	6:30	Frosh Hockey	Tufts	M.I.T.
Feb. 13	4:00	Vars. Wrestling	U. of Mass.	U. of Mass.	Feb. 27	7:00	Frosh Swimming	Gardner H.S.	M.I.T.
Feb. 13	6:15	Frosh Basketball	Boston U.	M.I.T.	Feb. 27	7:30	Frosh Wrestling	Boston U.	M.I.T.
Feb. 13	7:30	Vars. Fencing	Harvard	M.I.T.	Feb. 27	8:00	Vars. Hockey	Tufts	M.I.T.
Feb. 13	8:15	Vars. Basketball	Boston U.	M.I.T.	Feb. 27	8:15	Vars. Basketball	Tufts	Tufts
Feb. 15		Vars. Rifle	Northeastern	Northeastern	Mar. 1	6:30	JV Basketball	Coast Guard	New London
Feb. 15	4:00	Vars. Squash	Army	M.I.T.	Mar. 1	7:30	Vars. Hockey	U. of N.H.	U. of N.H.
Feb. 15	6:15	JV Basketball	M.I.T. Frosh	M.I.T.	Mar. 1	8:15	Basketball	Coast Guard	New London
Feb. 15	8:15	Vars. Basketball	Bowdoin	M.I.T.	Mar. 1		Vars. Rifle	Tufts	M.I.T.
Feb. 16	1:00	Frosh and Vars. Indoor Track	Northeastern	Northeastern	Mar. 1-2		Vars. Fencing	New England	M.I.T.
					Mar. 1		Vars. Squash	Yale	M.I.T.
Feb. 16	2:00	Vars. Fencing	Stevens	M.I.T.	Mar. 2	2:00	Vars. Swimming	W.P.I.	Worcester
Feb. 16	2:00	Vars. Hockey	Army	M.I.T.	Mar. 2	2:00	Frosh Swimming	Moses Brown	M.I.T.
Feb. 16	2:00	Vars. Squash	Trinity	Trinity	Mar. 2		Indoor Track	IC4A (N.Y.)	N.Y.
Feb. 16	2:00	Frosh Squash	Trinity	Trinity	Mar. 2		Vars. Wrestling	Dartmouth	Dartmouth
Feb. 16	2:00	Frosh Swimming	Andover	Andover	Mar. 5	7:00	Vars. Hockey	Holy Cross	Holy Cross
Feb. 16	2:30	Vars. Swimming	Trinity	Trinity	Mar. 5	7:00	Frosh Swimming	Brookline H.S.	M.I.T.
Feb. 16	4:30	Frosh Hockey	Milton Acad.	Milton Acad.	Mar. 8-9		Vars. Squash	Nationals	M.I.T.
Feb. 16	7:00	Frosh Wrestling	Coast Guard	New London	Mar. 8-9		Vars. Swimming	NEISA	U. of Conn.
Feb. 16	8:30	Vars. Wrestling	Coast Guard	New London	Mar. 8-9		Frosh Swimming	NEISA	U. of Conn.
Feb. 17		Skiing—	Tufts	Laconia, N.H.	Mar. 9		Vars. Wrestling	NEIWA	Williams
			Trophy		Mar. 9		Frosh Wrestling	NEIWA	Williams
Feb. 19	7:00	JV Basketball	Harvard	Harvard	Mar. 15		Vars. Rifle	B.C.	B.C.
Feb. 19	7:30	Vars. Fencing	Boston U.	M.I.T.	Mar. 15-16		Vars. Fencing	Easterns at New York	New York
Feb. 20	6:15	Frosh Basketball	Northeastern	Northeastern					

F. S. Lincoln, '22

Caught at sunrise on a week end are these commercial fishing ships at Brigham's Shipyard, whose president is Theodore W. Brigham, '00. Greenport, Long Island, is the locale.







◀ Harold E. Edgerton, '27, Professor of Electrical Measurements at the Institute, recently obtained this double flash of Charles Batterman, diving coach at M.I.T.

## William T. Hall: 1874-1957

■ William T. Hall, '95, Associate Professor of Analytical Chemistry, Emeritus, died in Rochester, Mass., on Friday, January 4, at the age of 82 years.

An active member of the M.I.T. Faculty for 42 years, Professor Hall was born in New Bedford, received his bachelor's degree at M.I.T., and studied at the University of Göttingen, Germany, before joining the Institute staff in 1898 as assistant in analytical chemistry. He was associate professor from 1918 until his retirement in 1940, and from 1942 to 1943 he headed the science department at Thayer Academy in South Braintree, Mass.

The author and translator of many chemical texts and reference works, Professor Hall was assistant editor of *Chemical Abstracts* for 50 years and was a member of the American Chemical Society, American Association for the Advancement of Science, and Sigma Alpha Epsilon.

Professor Hall is survived by his wife, the former Agnes D. Allen; a son, William A., of Philadelphia; four daughters, Catherine S. and Margaret D., both of Rochester, Mrs. Stanley J. Mannette of Boston, and Mrs. George W. Schell of Havertown, Pa.; and a brother, George A. Hall of Portsmouth, N.H.

## Visiting Committee Report on Architecture

■ The Visiting Committee on the School of Architecture and Planning\* met at M.I.T. on Saturday, March 3, 1956 in the office of Pietro Belluschi, Dean of the School of Architecture and Planning. Present were Charles Abrams, William T. Aldrich, '01, Thomas C. Desmond, '09, Minoru Yamasaki, and William Emerson, chairman. During the morning session, and/or at lunch, President James R. Killian, Jr., '26, Vice-president Julius A. Stratton, '23, Dean Belluschi, and Professors Frederick J. Adams and Lawrence B. Anderson, '30, were also present.

After introductory remarks by Dean Belluschi, the Committee first considered the School's growing resources in fellowships, professorships, and sponsored research projects.

Particular attention was given to the methods of teaching History of Architecture by Albert Bush-Brown, Assistant Professor of Architectural History, and to the report of the *ad hoc* committee appointed by President Killian to consider the future needs of the Department of City and Regional Planning.

Professor Bush-Brown made an excellent analysis of the material and procedure he is using in teaching the history of architecture. It is proposed that eventually there shall be two history courses, one each in the third and fifth years in place of the present single course in the third year. Throughout these

\* Members of this Committee for 1955-1956 were: William Emerson, chairman, William T. Aldrich, '01, Thomas C. Desmond, '09, H. Kenneth Franzheim, '13, Thomas D'A. Brophy, '16, Charles Abrams, Richard M. Bennett, Samuel A. Marx, and Minoru Yamasaki.

(Concluded on page 222)

## Games Played

		Scores			
Date	Event	Winner		Loser	
Dec. 15	Vars. Basketball	Springf'd	78	M.I.T.	60
Dec. 15	Frosh Basketball	M.I.T.	92	Exeter	69
Dec. 15	Vars. Hockey	Hamilton	5	M.I.T.	1
Dec. 15	Vars. Squash	M.I.T.	9	Adelphi	0
Dec. 15	Vars. Swimming	M.I.T.	60	R.P.I.	26
Dec. 15	Frosh Wrestling	Scituate			
		High Sch.	21	M.I.T.	7
Dec. 19	Frosh Basketball	M.I.T.	67	Belmont	
				Hill	29
Dec. 19	Frosh Hockey	Belmont			
		Hill	10	M.I.T.	0
Dec. 19	Vars. Swimming	Harvard	69	M.I.T.	17
Dec. 19	Vars. Wrestling	Harvard	17	M.I.T.	6
Dec. 19	Frosh Wrestling	Harvard	27	M.I.T.	1
Dec. 20	Vars. Basketball	M.I.T.	69	Lowell	52
Jan. 8	Vars. Basketball	Harvard	76	M.I.T.	60
Jan. 9	Vars. Swimming	M.I.T.	60	Tufts	26
Jan. 9	Frosh Swimming	M.I.T.	56	Tufts	19
Jan. 10	Frosh Basketball	M.I.T.	72	Governor	
				Dummer	43
Jan. 11	Vars. Hockey	Williams	16	M.I.T.	2
Jan. 11	Vars. Rifle	Postal match with University of N.H. No results to date.			
Jan. 12	Vars. Fencing	M.I.T.	17	Trinity	10
Jan. 12	Vars. Hockey	Bowdoin	5	M.I.T.	4
Jan. 12	Frosh Hockey	Middlesex	7	M.I.T.	2
Jan. 12	Vars. Squash	Williams	9	M.I.T.	0
Jan. 12	Frosh Squash	Brooks	5	M.I.T.	0
Jan. 12	Frosh Swimming	Exeter	58	M.I.T.	19
Jan. 15	Frosh Basketball	M.I.T.	78	Harvard	76
Jan. 15	Frosh Squash	Harvard	9	M.I.T.	0

# Education for Our Industrial Society

Proper instruction, inspiration, and social support  
can raise society to higher levels of achievement  
by liberating the creative energies of our people

by WILLIAM R. HAWTHORNE

**T**HERE is no topic which can arouse more passionate discussion than that of education. It is a subject which stirs our hopes, our prejudices, and our fears. It is natural that we should want to transmit to the young the knowledge, the experience, and the wisdom which our civilization has gained, but it is not a task which we do easily or well. We are often over-anxious. The *rites de passage* of the primitive tribes, the Spartan dormitories, the medieval apprenticeships and the English public schools have shown elements of a stern approach to the subject which has often tended to make the education of the human race a long agony of psychological discomfort. "Spare the rod and spoil the child," while it suggests that things learned with pain have remembered significance, illustrates the blind fierceness with which human society has endeavored to protect and perpetuate itself.

Even today education is a focus for many social tensions. We try to protect our youth from heresy by teachers' oaths. We direct searching glances at our educational system when we run short of engineers and scientists. We pillory it for producing uncultured technicians in response to the demands of a materialistic age. We blame it for sloth, incompetence, and juvenile delinquency. The concern with which we view our educational methods and objectives is often so profound that it must surely reflect some deep anxiety about the standards and wisdom of our society.

It would be wrong however to assume that, because we live in difficult times or because there is criticism from one quarter or another, our present-day educational pattern which has been evolved through the efforts of many wise men is a weak or inefficient instrument. It has great elements of strength, not the least of which is its capacity for change and evolution. It is remarkable how the immense variety of new scientific knowledge only recently acquired is now assimilated by many young minds in a space of a few years at school, without driving out the older aspects of our inherited educational tradition. It is remarkable how many people are now capable of understanding ideas which were formerly only appreciated by the very few. In fact the development of our educational system reflects the development of

the society in which we live, hence it is not surprising that our educational process today is expensive, complex and difficult.

Let us consider one aspect of the problem of education — the impact of the growth of science and engineering as a major human activity on our educational policy. I do not wish to discuss the questions of how to teach engineering as a specialized subject. This we can leave to schools of engineering such as yours. Instead I want to discuss whether we can continue to regard science and engineering as subjects which need only be taught to specialists or whether science and applying science should be taught even to those who will not eventually become scientists or engineers.

The fact is that all communities today are drawing their real power — the power which supports their commercial and political strength — from their industries, and particularly from those industries in which applied science and technology play dominating roles. We no longer live in a primarily agricultural or mercantile society. Ours is an industrial society.

In this society, as in earlier ones, finance and commerce still play important roles. When the industrial revolution started in England in 1760, new ideas and developments in commerce went hand in hand with the new notion of applying the results of scientific investigation to useful purposes. The development of the steam engine by the mechanic James Watt needed the support of cheap capital as well as the counsel of the scientist, Professor Joseph Black of Glasgow. The growth of economic theory and its application has been a major factor in the creation of our industrial society. But our power today rests basically in our ability to turn natural resources into machines or means of sustenance or defense. It is this power which has enabled us to free slaves, live longer, and increase our population. It has given more leisure, and the opportunities leisure affords, to millions rather than to a very few. It has led us to new philosophical speculation and inquiry and has altered the relations between man and man. The development of this basic power has been, and is, one of the triumphs of the human mind. We describe the intellectual activities involved as science, applied science, and technology.

In the Seventeenth Century the examination of nature, divorced from religious mysticism, attracted the interest of many brilliant thinkers. It was not done in academic isolation, for many of the philosophers of

► The text of this article was originally presented as the Mollie B. Mandeville Lecture at Brown University on April 25, 1956, while Dr. Hawthorne was Hunsaker Professor of Aeronautical Engineering at M.I.T.





M.I.T. Photo

Robert R. Shrock, Professor of Geology, and two of his students at the Institute exemplify the author's contention: "It is remarkable how the immense variety of new scientific knowledge, only recently acquired, is now assimilated by many young minds in the space of a few years at school without driving out the older aspects of our inherited educational tradition."

the day were also men of affairs. In England, Newton became responsible for the Royal Mint and was involved in other government activities. Locke founded the Board of Trade. The beginning of the Eighteenth Century saw the intellectuals and aristocrats of England applying the scientific method to agriculture and manufacture. In 1760 there was an unparalleled surge of innovations in transport, trade and finance and, importantly, in engineering and industry. T. S. Ashton quotes a schoolboy's apt remark: "About 1760 a wave of gadgets swept over England." Whatever the reasons for the suddenness with which the industrial era started, it was not the result of a series of inventions randomly achieved by unschooled mechanics supported by greedy entrepreneurs. Profit and random invention were no new thing. They were the incentive and the evolutionary steps in the growth of manufacture and trade throughout the ages. Much of the invention had been passed along from journeyman to apprentice in the form of what we now call "know-how" — a knowledge of the how to do things rather than the why of doing things. Apprentices learned the know-how as braves in a primitive tribe by watching, trying, being cuffed, and trying again. There are many group activities today in industry and elsewhere in which this useful procedure is still applied.

But, if the industrial developments which marked the beginning of the industrial revolution could be traced only to a remarkable number of random inventions, it would be difficult to explain the developments which have continued with quickening pace ever since. The great innovation of the industrial revolution was to use the methods of natural philosophy for practical purposes. This has not taken the randomness out of invention, but it has supplied, and continues to supply, not only new understanding from which more inventions can spring but also new methods by which they can be nurtured. Our industrial era has therefore been inspired by a new intellectual activity. It is new not because men's minds are sharper, but because the intellectual energy previously devoted to philosophical speculation about man's spirit and man's place in the universe has been directed to understanding nature itself and the artifacts which we ourselves have built. This is an altogether easier problem and we have made good progress with it.

It was fortunate that the natural philosophers who contributed to the knowledge on which much early invention was based, did not distinguish too clearly between the pure and applied branches of their subject. If they had, the growth of much new knowledge would have been retarded. They might have confined themselves to studying natural phenomena, and obtaining important scientific results, which they would then expound to fellow scientists and students. Perhaps a few of their listeners might have had flashes of inspiration in which they invented some useful device based on the new discovery. The true philosophers would doubtless shudderingly withdraw their minds from such indecent thoughts. The mere mortals would be tempted to speculate further. They would become obsessed with the idea and hurry to get backers, patents, and manufacturing resources. Like Boulton and Watt they would have to devise methods of manufacture and train men in new skills. In much of their training they would pass on rules, procedures, and cautionary hints. The trainees would then train others, passing on know-how and taboos. If their machines were useful, a thriving group would establish itself around their design, manufacture and sale. Rival groups might arise to contest their sales. Much know-how might pass between the groups by purchase, capture, or stealth. Our group would defend itself by legal and financial means. Some member of it might devise a new process of manufacture or change the configuration of the machine. When tried, these might be found to give our group an advantage — no one would quite know why. Our erstwhile, but now depraved, philosopher might return to the pure scientist, whose discoveries were the basis of the original machine, with the problem which the competition or the new discovery posed. Here, of course, he would be coldly received. The distinction between the pure and the applied, between science and engineering would be clearly drawn. The pure scientist would not even attempt to understand the problem. His intellectual energy would be devoted to solving the mysteries of nature and not to elucidating the insignificant troubles of some man's profitable but vulgar toy. In any case he would have to talk with a

lot of unscientific fellows who would have no good records of what they had done, who could not separate their feelings from the facts and who would be unable to explain the reasons for their actions. The communication of ideas would be so difficult that nothing would be achieved. Our inventor would have to solve the problem himself. This he would try to do, but having spent so long in all the various unscientific problems of launching his enterprise, he would find his knowledge rusty and his thinking unsure. At the same time he would still have the enterprise to manage, the customers to persuade or mollify, new capital to raise and new designs to bring forward. He might hire a young renegade scientist to help, but the young man would have problems of communication too. He would not be accepted by the others in the company, he would not be familiar with the know-how, and his attempts to tamper with the machine, the basis of their livelihood, would be feared and resented, particularly by those who had high status because of their superior know-how and knowledge of the taboos. Eventually the originator of the machine would die and the bright young man would take his objectionable ideas somewhere else. The company would then emphasize its taboos and codify its know-how in precious little black books which would be kept in a safe place by a few, or perhaps only one, responsible man. It would coast slowly to its bankruptcy, sustained by excellent traditions and a generous policy to its employees. Its machines undoubtedly would have served a useful purpose, and salaries and dividends would have been paid.

Many companies have suffered such, or equivalent, fates, and the knowledge which they seemed to possess and which could perhaps have been made explicit, has passed into the lore with which our industrial society abounds.

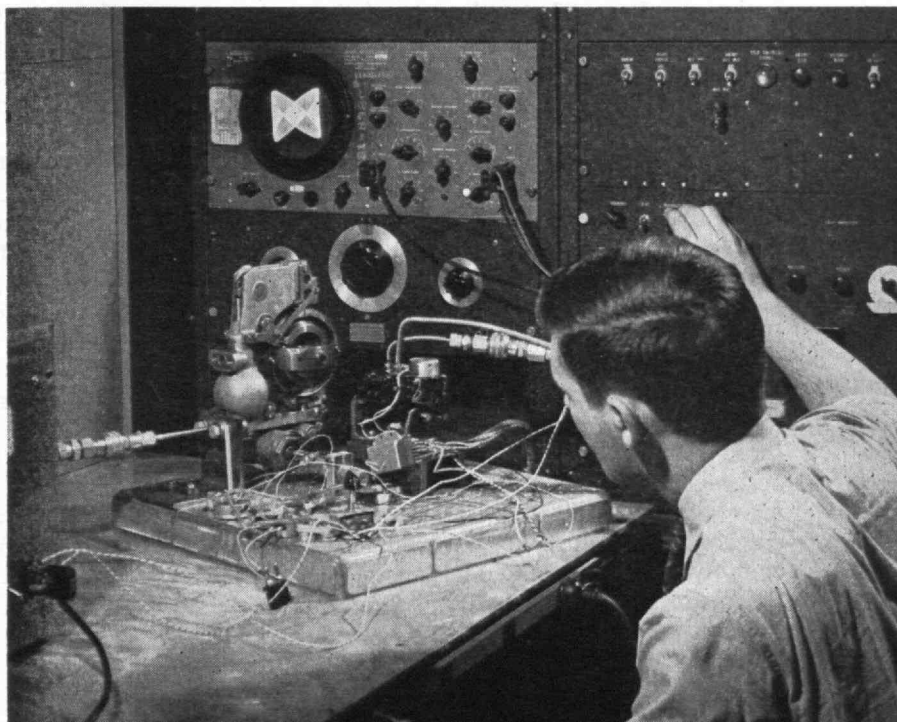
Fortunately not all the natural philosophers retained such purity of spirit. Some were prepared to study machines as well as nature. The results of their study were particularly remarkable in the example of

the steam engine. Carnot, Clausius, Kelvin, Rankine, and many others were interested in the steam engine because it posed the problem of how efficiently a heat engine could be made to convert the energy in fuel into mechanical work. Their attempts to understand it led to the formulation of the second law of thermodynamics and to the new thermodynamic concept of entropy. It should be a source of great stimulation to technologists that the most sweeping philosophical hypothesis of the Nineteenth Century was inspired by a machine. The same machine, in revolutionizing industry, transport, and power also started a social revolution. Our understanding of thermodynamics has led on to new inventions which, as they are manufactured, developed, used and studied, may in turn lead to profound new insights into the processes of nature. The calculating machine is a promising example, for the study and development of computing machines may one day lead us to understand our own processes of thought and even emotion. Certainly the study of machines is no second-rate intellectual activity. Philosophy may eventually owe as much to machines, let us say, as machines owe to philosophy.

So far I have tried to show that our industrial society owes its support and continuing progress to an intellectual activity which is now only about 200 years old. The intellectual activity in turn derives fresh vigor and new truths, sometimes of widespread significance to mankind, from a study of industrial processes and artifacts. I suggest that it is possible that a slowing down or stopping of what we call industrial progress might also slow down the intellectual activity which both supports it and is inspired by it. Humanity might then suffer a stagnation similar to that of the Dark Ages. Although this is too speculative a proposition to be defended in the large scene of a world-wide civilization, it certainly can be seen in those small groups which have failed to maintain a relevant intellectual activity and have slipped back to a primitive reliance on know-how and taboos.

M.I.T. Photo

*The study of servomechanisms, as exemplified in this photograph in one of the Institute's laboratories, effectively integrates a wide range of engineering and scientific disciplines. Such integration helps to advance education in an industrial society; it helps remind us — "The fact is that all communities today are drawing their real power — the power which supports their commercial and political strength — from their industries, and particularly from those industries in which applied science and technology play dominating roles. We no longer live in a primarily agricultural or mercantile society. Ours is an industrial society."*





Many industrial firms and some armies have suffered from such declines.

Such intellectual activity and its cycle of application and stimulus which I have described is not an easy thing to maintain. It requires social sanction. It decays if social support is withdrawn or is inadequate. It also requires people with the requisite knowledge and ability to perform the various tasks involved. We need scientists, pure and applied, if we must so divide them; we need engineers who must cover the ground between science and practice; we need many intelligent and able people who must inevitably but not necessarily disastrously for themselves or society, perform tasks in which know-how is their main guide. Although our industrial society cannot progress or even stay where it is without much intellectual effort, the main method now, as in the past, by which organizations execute their tasks is by teaching their members the know-how of the job. This is comparatively easy. I shall return later to the problems which dependence on unenlightened know-how may present.

To sustain our society we need adequate numbers of professionally trained people and adequate social support for their efforts. Until fairly recently both were forthcoming in sufficient quantity. But the last 30 or 40 years has seen such an increase in scientific knowledge and its application in industry that we are now in grave difficulties. Many industries are finding, consciously or unconsciously, that progress today depends on scientific work which has a degree of sophistication unbelievably greater than that thought necessary even a few years ago. In one important field, that of defense, the demands on science and technology have grown enormously both in sophistication and size.

There is some evidence that society is not prepared to support much more of the sort of intellectual activity which these demands imply. There are many ways of entering industry other than through the technological wicket. The prestige of finance, related historically perhaps to the paramount need for capital in the development of America, attracts many able young men and steers them away from science and technology. Their education follows the older, aristocratic tradition of the liberal arts. In England, industry and technology are not always the careers which attract the talented and best endowed. In a spirited editorial on the fact that the Russian output of university graduates in engineering is 60,000 per year, the American 22,000 and the British 3,000, the *London Times* (December 31, 1955) stated: "There is no call for unreasonable alarm. It would be a dangerous mistake for too much talent of the first order to be diverted into science and technology, because the strength of a democratic state depends on qualities in politics and administration which are still best fostered through a study of the liberal arts." The editorial favored instead more technical education for those going into, or already in, industry in technical and night schools throughout the country. Of course many of those who study liberal arts in a university enter posts in industry or government where they inevitably come into contact with, and even administer, the major intellectual activity of our industrial so-

ciety. It is too much to hope that they can, by virtue of their liberal education alone, administer with more than moderate success an organization whose long-term future depends on intellectual processes with which they are not familiar.

The danger which our present educational policy presents is that it will develop an unbridgeable chasm between the scientists and technologists on the one hand, and those with a liberal arts education on the other. Perhaps this cleavage already exists. The increasing complexity of scientific knowledge and the methods of applying it will not reduce the gulf. The danger of a set of high priests in an industrial group, separated by a block in communication from those who are managing and operating the enterprise, but essential as intellectual leaders to its success, has been illustrated in the hypothetical example given earlier.

Our society is operated, managed, and vitalized by those in many walks of life. Their range of abilities and intelligence is vast. In the industrial core there are those who are guided by know-how working with imaginative engineers whose long schooling in science has equipped fertile minds. Between these there are gradations of knowledge and ability. An intelligent educated man who has no background of scientific schooling can operate in industry or on its periphery with many mental attitudes. He can fail to see the intellectual activity described and regard industry as merely a means of manipulating resources to make money or provide defense. If this is so, his education is surely at fault. He is unfamiliar with one of the vital ideas of our times. He can only, as Job said, darken counsel by words without knowledge.

Our educational program even for a liberal arts student must include a study of science extended over the years of school and college. I would select physics as the subject because it has the elements of precision and romance which were so valuable a feature of Latin — a subject which is now lost to us as an educational medium. I would tend rather naturally to emphasize the applications of physics and its history. The study of application, in the form of some aspect of engineering, has the advantage that it relates the abstractions of science to the realities of manipulation. About eight years of physics taken at not too fast a pace is not an unreasonable requirement for anyone who pretends to be an educated man in 1956! It may be an unreasonable requirement in terms of teaching facilities at schools and colleges.

It is necessary to spend some time on science if we are to pass successfully through Whitehead's three phases of education, the romantic, the disciplinary, and the integrating. To stop at some intermediate stage would rob the pupil of the reward for his efforts, for it is in the last phase, when he is able to appreciate the pattern of knowledge, that intellectual vision comes. Then he acquires an understanding of the subject, supported by organized ideas and relevant techniques, which will enable him to live more fully in this new epoch.

The arrangement of such a syllabus, the provision of teachers and facilities, is no easy task. There is also the question of the aptitude of the pupils. Physics,

(Continued on page 212)



Raymond E. Hanson

*The Thoreau Room of the Colonial Inn at Concord, Mass. gives some hint of the food technology of the colonial era.*

## Kitchen Revolution

**The preparation of man's food has changed drastically as boundaries of technology are forever pushed ahead**

**by HARRY W. VON LOESECKE**

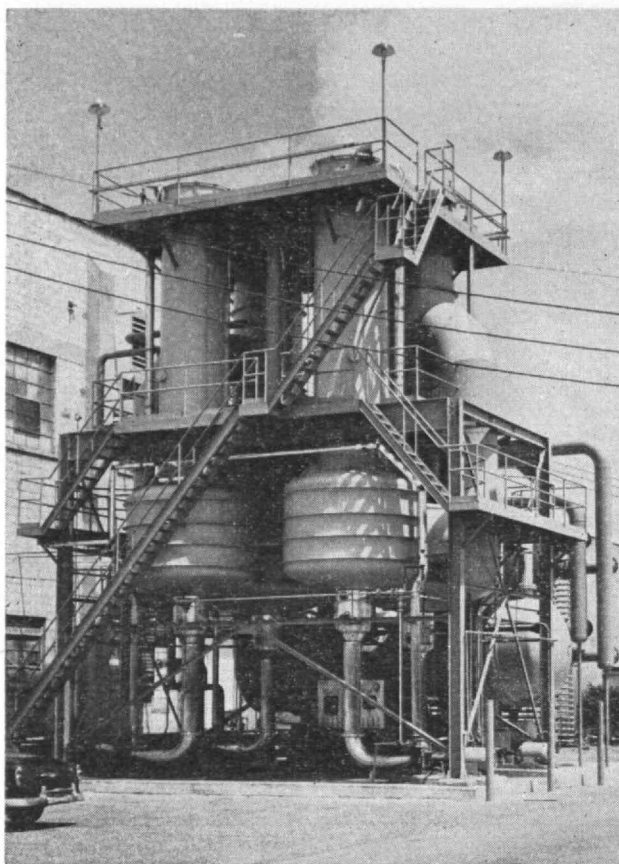
**I**t was a large room. One side was nearly completely taken up by a cast-iron stove, nickel-plate trimmings gleaming, and its massive bulk polished to the brightness of very new patent-leather shoes. Tucked underneath the stove was a battered scuttle, half filled with coal. Several pots on the stove were spouting steam, and within the dark maw of an oven, rested several pans of bread and pie, their sweet aroma permeating the moisture-laden air which coated windows and walls with a dewy blanket. Opposite the stove loomed a clumsy soapstone sink with brass piping, piled high with pots and dishes waiting to be scrubbed with hot water from the tank hanging like a miniature swimming pool at one end of the stove. In the far corner of the room was a heavy table

draped with a red oilcloth. A few high-back chairs were nearby and tucked away out of the main lane of travel. The floor was covered with a flower-design linoleum, nearly worn through in front of the stove and sink. Leading off the room, was a smaller one provided with a counter, and walls lined with wooden cabinets stacked full of pots and pans and all qualities of dishes.

This was a kitchen of 50 years ago where mother spent most of her waking hours, either preparing the next meal, or cleaning up from the last. Her lot was one that today's mother would neither tolerate nor could long endure.

The cooking stove of that era would seem a Frankenstein according to our present standards:





U.S. Department of Agriculture

*Low-temperature evaporator for making frozen concentrated orange juice, of which more than 60,000,000 gallons were produced in 1954. The equipment shown can evaporate more than 3,600 gallons of water per hour.*

"Outside the modern accessories of warming oven, water tank, front or coil, the common cooking range consists of a rectangular iron box divided into three compartments, viz., fire-box, ash-box and oven . . . the fire is regulated and controlled by dampers; these admit air to the burning fuel, check the strength of the draft (of air) and control circulation of heat about the oven."<sup>\*</sup> Sears, Roebuck sold such a stove for \$12.50.

In those days that are now but an afterglow, mother did not rush home from work, seize the can opener and be off to an evening's entertainment with father in another half or three quarters of an hour. Indeed not! The evening meal was sort of a ritual and the climax of a busy and happy day. "At night, there can be no excuse for an indifferently prepared meal; everything can be made ready in the early part of the day and the final cooking completed without the rush and hurry incident when other work is going on."<sup>†</sup>

During this leisurely repast, we should "let the brightness of the day that has come to us, the lively sayings that we hear cheer the hours of the meal time, and, lest we miss some good thing that will bear repeating, let us cultivate the habit of looking for brightness everywhere."<sup>†</sup>

<sup>\*</sup> Janet McKenzie Hill, *Practical Cooking and Sewing*, page 2 (New York: Doubleday, Page and Company, 1909).

<sup>†</sup> Hill, *op. cit.*, page 703.

Many of the dishes served required a considerable amount of skill, and unless mother was something of a culinary artist, the results of her labors were often disappointing. Even the preparation of a pot of coffee amounted to a major project: "In a coffee-pot that has been well-scalded put twice as many tablespoonfuls of ground coffee as there are cups to be served; add as many egg-shells, washed before the eggs were broken, as there are cups to be served; or the white of an egg may be used, that of one egg being sufficient to clear about seven tablespoonfuls of ground coffee. Add a tablespoonful of cold water for each cup of liquid desired, and mix thoroughly, add the requisite number of cups of freshly boiling water and let boil 5 minutes after boiling begins. Pour a little cold water—from a quarter to half a cup—down the spout and set the pot where it will keep hot, without simmering, for 10 minutes. The aroma is thought to be retained by filling the nozzle with tissue paper, before the boiling water is poured over the coffee."<sup>‡</sup> At this point, if father has been delayed and is not ready for his coffee, then mother is in for some more alchemy. The decoction must be poured from the grounds, the pot cleaned, the coffee returned to the pot, kept hot and then an additional teaspoonful or more of fresh coffee added "for the sake of aroma."

Contrast this procedure with that used now, when a cup of coffee can be made by merely dissolving a teaspoonful of soluble coffee in a cup of hot water. Having a dim origin in the closing days of the Civil War, soluble coffee did not catch the consumer's fancy until World War II, and today over 20 per cent of all coffee consumed in the United States is made from soluble. This growth in use is due to marked improvements in quality and solubility brought about by advances in chemistry and engineering during the past few years.

The housewife today has few of her forebears' tiring chores of washing, peeling, plucking, soaking, shelling, and juicing; nearly all of these tasks have been taken over by the processor. Instead of spending 90 per cent of her time in the kitchen wrestling with a temperamental stove and mounds of dirty dishes, she spends about 30 minutes per meal. Probably at least one third of the food expenditures of urban housekeepers is for bread and other baked goods and ready-to-serve cereals, for cooked and canned meats, poultry and fish, for canned and frozen vegetables, fruits and juices, for jams and marmalades, soups and other partially prepared foods.

This kitchen revolution and emancipation of the housewife has been the result of the impact of technology on modern society. There has come about an increase in the percentage of married women with outside jobs, because in many families income has not kept pace with rising prices and it has been found imperative to have another wage earner. Then, too, the prestige of being a good cook is smaller than it used to be. Success of the revolution has been made possible by advances in food technology and engineering with the creation of new products for the convenience of the consumer.

<sup>‡</sup> Hill, *op. cit.*, page 49.

Charles G. Mortimer, President of General Foods, refers to these products as containing "built-in maid service."

One of the more recent and perhaps most successful foods with built-in maid service is frozen concentrated orange juice. Each six-ounce can of this concentrate contains the juice equivalent of about four and one third pounds of fresh oranges, and will make one and one half pints of orange juice. The housewife prepares the finished juice by merely adding three cans of cold water to the contents of the can; there is no reaming of the fruit, cleaning up afterwards and disposing of the peels. Over fifty times as much frozen concentrate is sold today as was sold eight years ago. Yet this product would not have been possible without the development of automatic juicing equipment. Twenty-five years ago oranges were juiced by hand labor in citrus processing plants, one man being able to produce between 10 and 15 gallons of juice per hour. On this basis, it would require a labor force of approximately 2,500 people to extract enough juice to keep one of the modern citrus processing plants running one day. One automatic juice extractor can now produce in one minute as much juice as one man formerly extracted in an hour.

Another development that made frozen concentrated orange juice possible was the engineering of low-temperature evaporation. Although concentrated fruit juices have been known for many years, they suffered flavor damage during evaporation, even though water was removed under a high vacuum. Today juice is still evaporated under a high vacuum, but steam is no longer the chief source of heat. Instead, the heat obtained by compressing ammonia gas is used, because this offers better temperature control. After some of the heat of the compressed ammonia is used, it is allowed to expand and the cold ammonia used to condense the vapors boiling from the juice under vacuum. Two or more separate evaporators may be hitched together in series with the economy of using the vapors from one evaporator to heat the liquid in the succeeding one, an old trick in sugar boiling. Vapors from the last evaporator in the series may be recompressed and used for heating, thus effecting further economies.

Fresh orange juice can also be purchased in paper-board cartons in the same manner as fluid milk, and at a cost comparable to frozen concentrated orange juice. Fresh juice is being produced in California and Florida and shipped in refrigerated trucks. Present production in Florida alone amounts to about 20,000,000 to 40,000,000 gallons a year.

Recent engineering advances by research workers of the U.S. Department of Agriculture have shown that orange juice can be dried without loss of flavor or nutritive value. And the product can be stored without refrigeration. Although many attempts have been made in the past to dry orange juice, the product failed to keep when stored at room temperature. The chief reason for this was the comparatively high (about 3 per cent) moisture content of the dry product. Material containing 1 per cent or less moisture was found to be stable on storage at room temperature. But it would be too expensive to dry orange juice to this low moisture content in any type of com-

mmercial drier. Then a scientist of the U.S. Department of Agriculture came up with the idea of doing the final drying in the packaged orange juice itself. This was called "in-package desiccation." It works like this: as the orange powder comes from the drier, it contains about 3 per cent moisture which is reduced to less than 1 per cent by packing the powder into the final hermetically sealed container along with a small envelope containing lime. The lime takes up the moisture from the powder while it undergoes a conditioning period of from 60 to 90 days at room temperature. By the end of this time, moisture has been reduced to the point where the powder can be stored at higher temperatures without deterioration. Orange and grapefruit juice powders are now being produced in Florida.

The modern housewife need no longer be concerned with the often laborious task of preparing fresh vegetables for the table. In many instances, she can purchase fresh vegetables, ready for the table, in plastic sanitary containers. Pre-peeled potatoes, for French fries, can be obtained; production of this type of potato now amounts to more than 145,000,000 pounds a year.

In some instances, frozen vegetables have entirely replaced the fresh commodity, and annual per capita consumption of the former has increased from 0.4 pound in 1937 to about eight pounds in 1955. It has been estimated that by 1960, 10 per cent of all food purchases by the consumer will be frozen foods. The number of frozen products, and particularly precooked frozen foods, has increased tremendously during the past five years, and today there are close to 100 such foods for the convenience of the homemaker. About \$1.00 will buy a complete precooked turkey dinner consisting of turkey, potatoes, and a green vegetable, suitably garnished with butter, gravy, and spices. All that is necessary is to warm the dinner in the oven. There is no dishwashing after the meal, for the plate is thrown away.

The widespread consumer acceptability of frozen foods has been brought about by years of research by the chemist, bacteriologist, and engineer. The successful freezing of vegetables has been accomplished during only the past 25 years. It was said that it could not be done, because every farmer knows what happens when a frost blankets his vegetable crop. As the warm sun defrosts the vegetables, they rapidly deteriorate. Results of research in the freezing of vegetables seemed to substantiate what the farmer already knew, and there was loss of quality during freezing and storage. Then it was found that if the vegetables were blanched (that is, heated in steam or hot water for a few seconds) prior to freezing, unfavorable changes no longer took place, or were at least retarded. Apparently the heat inactivated certain enzymes which otherwise would bring about deterioration during frozen storage. The enzymes of fruits are not usually inactivated by heat before freezing, because heating changes the appearance, texture, and flavor of the fresh product. Sugar is therefore commonly used to protect frozen fruits and retard undesirable changes which might otherwise be brought about by enzyme action.

*(Continued on page 216)*



# The Wake of the Red Plague

Therapeutics has succeeded in causing its decline  
where law and education have been less successful

by JAMES A. TOBEY

As a monarch, Charles VIII of France was insignificant; as a military commander he was inept, and as a man he was weak. This feeble king was, nevertheless, more or less responsible for one of the most momentous events of history, the terrible outbreak of the red plague at the end of the Fifteenth Century. Why it occurred and where it came from is still one of the great mysteries of medical science.

Charles was the only son of the Spider King, the crafty and epileptic Louis XI. He came to the throne in 1483 at the age of 13, with his sister, Anne of Beaujeu, acting as regent until 1492. In 1491 Charles married Anne of Brittany, by whom he had four children. The oldest of these, the Dauphin, died of smallpox in 1495 at the age of four, while each of the other three succumbed shortly after birth. With them ended the House of Valois, rulers of France for a century and a half, since Charles died suddenly in 1498 at the untimely age of 28.

Having a shadowy claim to the throne of the kingdom of Naples through his grandmother's House of Anjou, Charles decided in 1494 to invade Naples and then proceed to the conquest of Constantinople, incidentally making himself emperor of the East. For this noble purpose he gathered a band of mercenaries and dissolute adventurers from all over Europe, including some of the former mariners from the recent expedition of Columbus to the Americas. Accompanied by a horde of camp followers, this profligate mob marched across Italy, pillaging and raping as they went.

In February of 1495 Charles and his vagabond army entered Naples in triumph, having encountered little opposition on the way. There he remained for three months, gaining little glory and much booty. A coalition was, however, formed against him and this, together with a disastrous epidemic among his troops, caused the king to beat an ignominious retreat. When the forces reached the borders of Italy, they scattered in all directions, and with them went the wake of the red plague. By the end of 1497 this pestilence had spread all over Europe.

This horrible disease was something new and startling, something which the doctors of the time apparently never had seen before. The French called it *la grosse verole*, or great pox, in contradistinction to *la petite verole*, or smallpox. They also called it the mal de Naples, but the Neapolitans patriotically retaliated by naming it the French disease. In England it was known as the Spanish disease, in Russia as the Polish disease, and in Persia as the Turkish disease. In the early days of the American Colonies it was the

French disease, and it still is occasionally referred to as *morbus Gallicus*.

Actually this malady was syphilis, but in a form more malignant and more epidemic than has ever been encountered before or since that time. The name "syphilis" did not come into being until after 1530, when an Italian physician, one Girolamo Fracastoro, wrote a poem about an innocent shepherd named Syphilus, upon whom the disease was said to have been inflicted by Apollo as punishment for homage to the king instead of to the god. This poem, which outlines symptoms and treatment in some detail, was not the first on this dubiously poetical subject, for an ode on *Las pestíferas bubas* had been composed by Francisco Lopez de Villa-lobos, as early as 1498.

Unlike modern syphilis, which is a relatively benign disease, although dangerous if untreated, this Fifteenth Century form of it was virulent in the extreme. It usually began with the characteristic ulcer on the genitals (chancre) and swelling of the lymphatic glands (buboes), but was rapidly followed by a pustular eruption over the body from the head to the knees, with ulcerations and crusts which presented a most loathsome appearance, so that even lepers shunned these disgusting patients. Extensive loss of tissue occurred, along with painful swellings on the bones, and various other unpleasant symptoms, which persisted for years if the patients were fortunate, or perhaps unfortunate, enough to survive. The death rate in this epidemic was high, unlike that of modern syphilis, which is very low.

## Source Is Controversial

The source of this historic outbreak is a matter of great controversy. Apparently syphilis did not exist in antiquity, at least there is no evidence of it in the bones of Egyptian mummies and other ancient human remains. In many venerable documents can be found references to ailments of the genitals, but these "sacred fires" are thought by most experts to have been gonorrhea, soft chancre, or nonvenereal ailments, rather than syphilis. Not until the early part of the Nineteenth Century (1838), in fact, were gonorrhea and syphilis differentiated as two separate and distinct diseases; prior to that time they were considered as different symptoms of the same malady. Although there are plenty of references in ancient documents to skin lesions which resemble those in the later stages of syphilis, these could easily be confused with other conditions, such as leprosy, lupus, scabies, St. Anthony's fire, and yaws.

(Continued on page 206)

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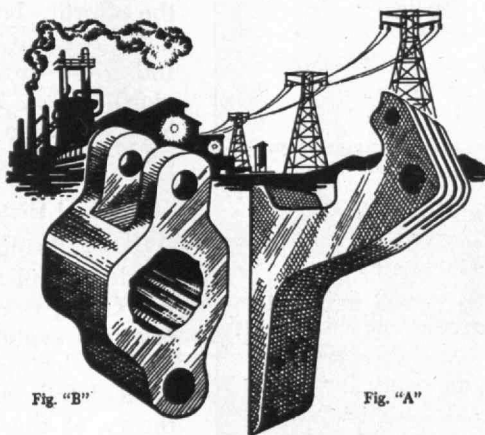
would weigh less and have a higher strength ratio than a casting. So, by using an aluminum extrusion, both space and weight were saved. Here is an example of where a material costing a little more per pound saved money in the end.

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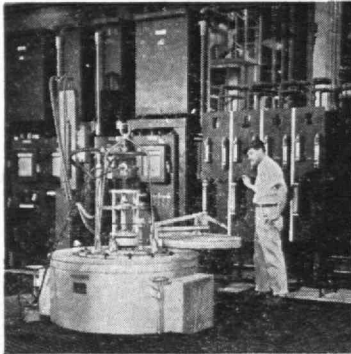
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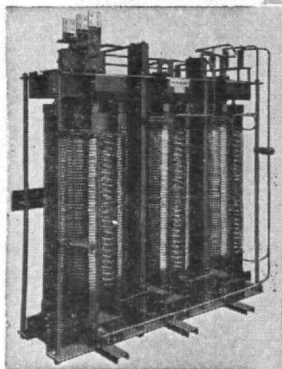


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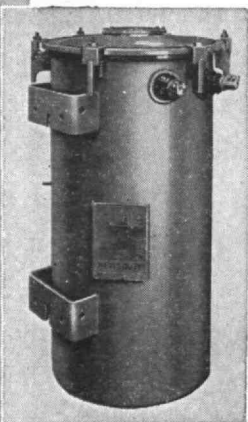
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## WAKE OF RED PLAGUE

(Continued from page 204)

The syphilis of the Fifteenth Century had appeared first in the City of Barcelona in Spain in 1493, shortly after Columbus returned from his voyage to America, even while the admiral was making his fervid report to Ferdinand and Isabella in this city. Many of the Spaniards infected with the painful buboes had joined the army of Charles VIII in the following year, and thus may have communicated the disease to the main body of this army.

Did the crew of Columbus bring back this so-called "Indian measles" from the West Indies as a grievous gift to the people of Europe? One school of historians has answered unequivocally in the affirmative, but there is reasonable doubt in the matter. A malady known as guaynaras, unquestionably syphilis, had existed among the natives of Hispaniola from remote times, so long in fact that the natives had developed a system of therapy for it, including the use of guaiac, balata, and other vegetable remedies, the regulation of the diet, temporary abstinence from intercourse, and other rigorous measures. From contemporary accounts we know that members of the crew of Columbus had intimate relations with the alluring brown maidens of Hispaniola and that many became infected with guaynaras. In the West Indies the disease was mild, but it became more violent when it reached Spain, so much so that a local physician, Ruiz Diaz de Isla, called it the "reptilian disease," and wrote a book about it.

### Medical Historians Examine Evidence of Origin

Other Spanish writers of the period who spent much time in the New World, such as Oviedo and Las Casas, were likewise convinced of the American origin of syphilis. Since that time numerous leading medical historians have examined the evidence in great detail, with the result that some espouse the theory of the American origin of the red plague, while others are equally certain that syphilis in a mild form was present in Europe long before the ill-fated campaign of Charles VIII, and that for some obscure biological reason it burst forth in virulent form in 1495. Certainly, venery and promiscuity, along with war, had been common in Europe for many centuries before this time. During the lax morality of the Middle Ages, the people may have become saturated with a mild type of syphilis and perhaps may have developed a resistance to it, although there is no immunity to modern syphilis. One argument that can be advanced against the American origin of the disease is the comparatively short time between the return of Columbus and the outbreak of the epidemic.

Although no less an authority than the late Sir William Osler favored the American origin of syphilis, the matter is and probably always will be in dispute. Osler, incidentally, called syphilis the "Great Imitator," because in its later stages the effects imitate those of so many other serious maladies. Many an illustrious monarch, from the time of David through the Roman emperors, the kings of France

(Continued on page 208)

# Meet Bill Hancock

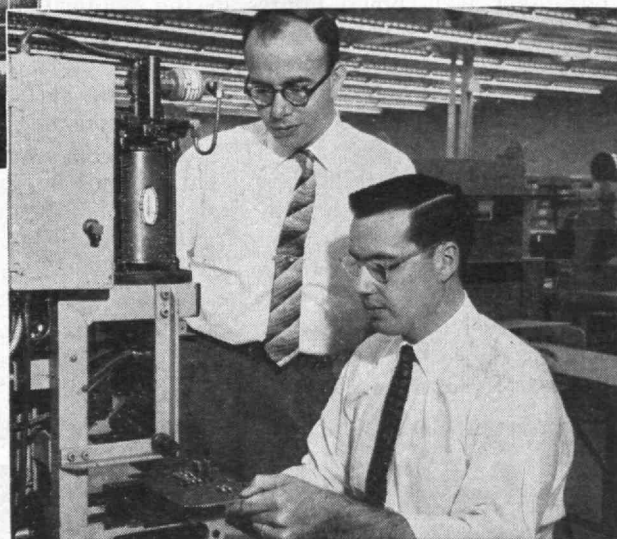
## *Western Electric development engineer*



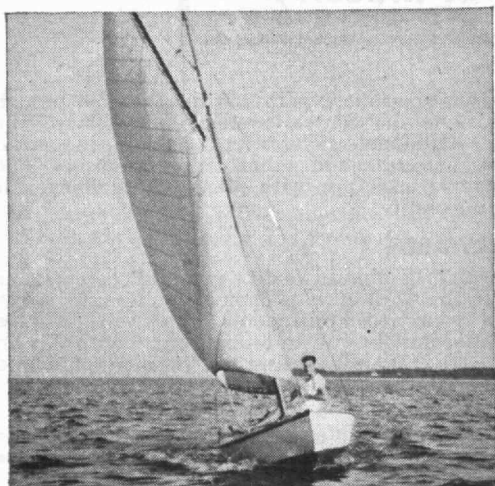
**Bill Hancock** is a graduate of Pennsylvania State University where he majored in industrial engineering. Bill joined Western Electric as a planning engineer in November, 1951, at the Kearny Works in New Jersey. Later, he was assigned to the new Merrimack Valley Works in North Andover, Massachusetts, as a development engineer. Here Bill is shown leaving his attractive New England home for his office while his wife, Barbara, and their daughter, Blair, watch.



**Bill's present assignment** at Western Electric: the development of methods and machinery for assembling one of today's most promising electronic developments—electronic “packages” involving printed wiring. At a product review conference Bill (standing) discusses his ideas on printed wiring assemblies with fellow engineers.



**Bill and his supervisor, John Souter,** test a machine they developed to insert components of different shapes and sizes into printed wiring boards. The small electronic packages prepared by this machine are being used in a new transistorized carrier system for rural telephone lines.



Sailing off the north shore of Massachusetts is one of Bill's favorite sports. He also enjoys the golf courses and ski runs within an easy drive from where he lives and works.

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## WAKE OF RED PLAGUE

(Continued from page 206)

from Hugh Capet onward, and so on down the ages, have displayed symptoms such as paresis, locomotor ataxia, skin diseases, lung and heart and kidney diseases, and other afflictions which might well be attributed to syphilis contracted in youth and allowed to progress without adequate treatment. Such symptoms in prominent persons indicate that syphilis existed long before the American adventure of Columbus.

The epidemic of the Fifteenth Century was not confined to common soldiers, sailors, and camp followers, but soon spread to the gentry and nobility. Among the victims of the great pox were Francis I of France, Henry VIII of England, the Borgias and the Medici, Ivan the Terrible in Russia, and numerous other well-known figures in the political, ecclesiastical, and cultural life of the times. In one of his campaigns against his rival, Charles V of Spain, Francis enlisted the aid of the infidel Sultan of Turkey who sent the notorious pirate, Barbarossa, to the aid of the French king. The buccaneer, well acquainted with syphilis, brought to Francis his favorite remedy, consisting of crude mercury mixed with rhubarb, ambergris musk, wheat flour, and lemon juice. The nostrum proved ineffective in this case, probably because it was too late.

Mercury had been advocated in the treatment of syphilis by de Isla and others as early as 1500, and

it remained in vogue for this purpose until 1910, when Dr. Paul Ehrlich prepared the arsenical compound, salvarsan, on his 606th attempt to find a specific against the *Spirochaeta pallida*, which had been discovered by Dr. Fritz Schaudinn in 1905. This spiral-shaped organism is now known scientifically as the *Treponema pallida*. A member of the same family of microbes, the *Treponema pertenue*, causes yaws, a nonvenereal tropical disease which resembles syphilis.

Despite the tremendous havoc created by the red plague at the end of the Fifteenth and the beginning of the Sixteenth Centuries, its vehemence gradually died down. Within 50 years of this first outbreak, when Fracastoro published his classic *De Contagione* (1546), syphilis had become much milder. It has continued in this category up to the present time, and today actually seems to be on the way out, thanks largely to new and improved methods of treatment.

Syphilis has been endemic in the United States since the earliest colonization, and always has been one of our most important public health problems. Except for some grave shaking of heads, not much was done about it until 1906 when an ardent reformer, Dr. Prince A. Morrow, organized the Society for Sanitary and Moral Prophylaxis, which subsequently became the American Social Hygiene Association under the able direction of the late Dr. William F. Snow. In 1911 Dr. Snow, as State Health Officer of California, had been responsible for mak-

(Concluded on page 210)

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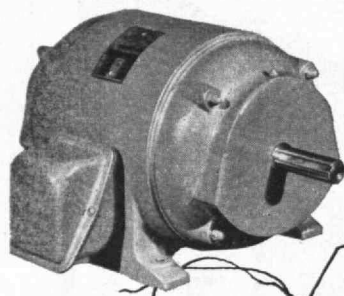
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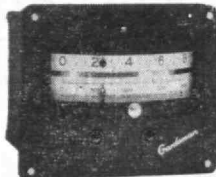
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## WAKE OF RED PLAGUE

(Concluded from page 208)

ing syphilis and gonorrhea reportable diseases, a drastic innovation soon followed in other states. Due to a false sense of delicacy in the early days, these reports often were by number rather than by name, which offered nice opportunities for statistical analyses, but not much else. During World War I federal and state legislation against the venereal diseases, much of it stimulated by Dr. Snow and his Association, was greatly intensified.

After 40 years or so of fervent educational and legal campaigns against the venereal diseases there was, however, no appreciable decline in the incidence of these maladies in the United States. A one-day survey of a representative sample of the population, made by the United States Public Health Service in 1927, revealed about four cases of syphilis per 1,000 population in the white and nearly double that in the nonwhite. A repeat survey in 1930 indicated an even higher rate.

### Successful Therapeutics

With the advent of new chemical methods of treatment, such as the sulfa drugs, and new antibiotics, such as penicillin, the situation began to change. In the last 10 years there has been a most gratifying decline in the morbidity and mortality of the red plague, therapeutics having succeeded where law and education had been less successful. The death rate from syphilis, at all ages for example, has been reduced by about 70 per cent, and that in infancy by 95 per cent. The premarital health examinations and blood tests which are now required by law in 40 states uncover, in many areas, only about one case of syphilis in 10,000 examinees, and doubt is being expressed as to the present scientific and economic justification for these tests, although certainly they were valuable 20 years ago.

The decline in the incidence and severity of syphilis does not mean that the venereal diseases have been conquered in the United States. It is reliably estimated that in 1953 there were about 150,000 reported cases of syphilis, and about 250,000 reported cases of gonorrhea in this country. How many unreported cases there were is anybody's guess, but the number probably equaled, if it did not exceed, the reported. The wake of the red plague may be diminished, but it is still with us.



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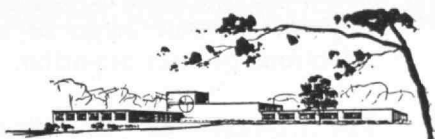
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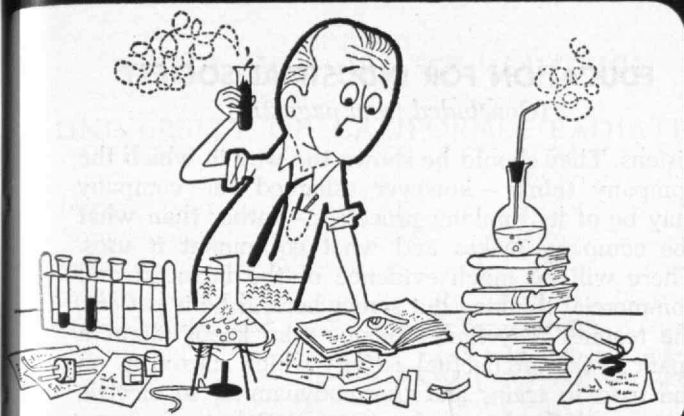
for instance, is not a subject which one can appreciate fully without algebra, and algebra is a stumbling block for some. It may well be that algebra suffers from the fact that in many educational programs it leads nowhere. The interest in algebra would be heightened if it led into science. Science would become more interesting and more easily taught if teachers themselves believed that it formed part of the knowledge without which no modern child can develop foresight and wisdom.

The key to education lies not only in the curriculum but even more with the teachers. It would undoubtedly be a mistake to force a new schedule of science courses for all pupils, if those who taught it did not understand the true purpose of their activity. Pupils are guided by their teachers and tend to accept their evaluations. This is what we mean when we say a teacher should inspire his pupils. It is difficult for a teacher brought up in a liberal arts tradition to regard science as other than a special subject or industry as other than a merely mechanical and commercial activity. Almost no teachers in general education have had any experience of industry at a level where the intellectual aspects of the technological process become apparent. They will often have to search hard in industry to find the creative intelligence at work, for it is not revealed to the casual visitor.

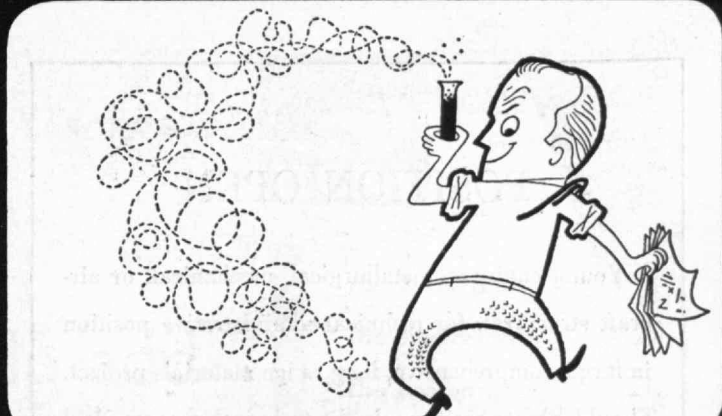
Teachers also may have difficulty in relating the activities of the industrial groups around us to the culture of the past. In some respects these groups are like primitive tribes. In spite of all their files and reports they have little or no written history. Their habits often bear the stamp of those societies in which the struggle for existence dominates all else. Their social structures are established around their work. Job and status are closely related. When the development of some new technology changes or makes obsolete the job, status and social structure also change, often with painful effects. The conflict between the natural desire to stabilize a social structure and the need for adapting it to technical innovations is discernible in industry today. On large or small scale, it presents the sort of raw material from which the student of the humanities has learned to construct a picture of man and his history. The struggle is interesting not only because of historical parallels, but also because the rate of technical innovation is now so great the social structures may rise and decay in a lifetime or less.

The process by which our sophisticated scientific knowledge fertilizes and gives life to our industrial activity is so subtle that most of those who work in industry are unconscious of it. The changing culture of a factory—to use the succinct title of Elliott Jaques's industrial research—is obscured from those who live in it as actors concentrating on their roles. It is for this reason an excellent suggestion to make special arrangements when teachers visit industrial establishments. In such visits they should be able to see not machines cutting metal but men making de-

(Concluded on page 214)



Do you have a process that needs a plant?



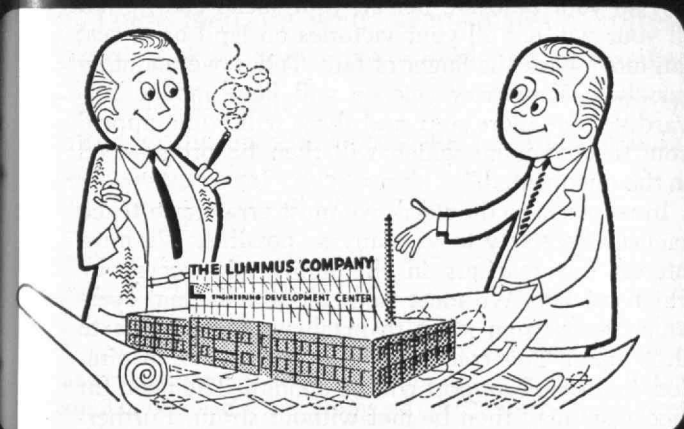
Or a product idea that needs a process?



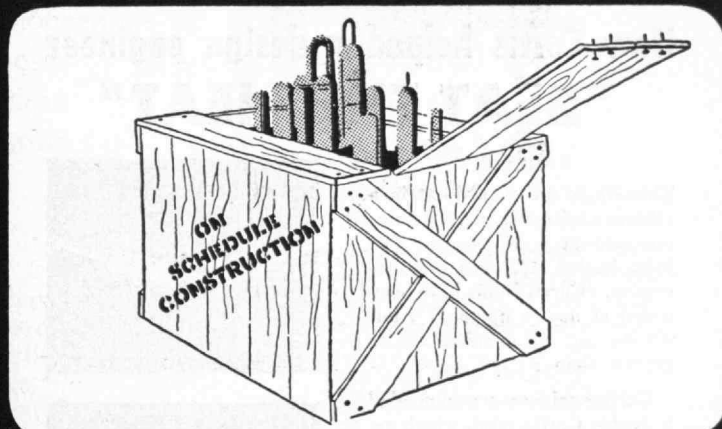
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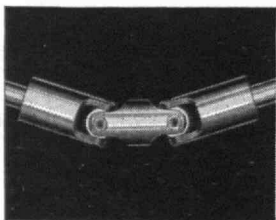
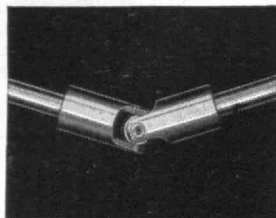
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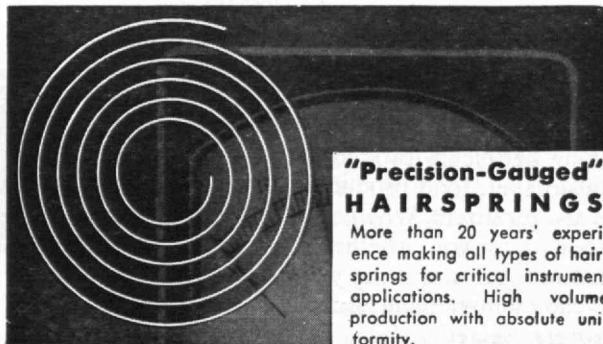
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cisions. They should be shown the way in which the company thinks — however ashamed the company may be of its thinking processes — rather than what the company makes and what equipment it uses. There will be much evidence of the financial and commercial thinking but somewhere, if he is patient, the teacher may find someone who keeps alight a spark of the intellectual activity which started us on the road to trains and thermodynamics, to electric lamps and the theory of communication, to airplanes and control. On his way back to the classroom our teacher will realize that he has had a glimpse of the process which has changed not only our surroundings, but also our ideas. It will be the task of his pupils to keep alive the creative energy of our industrial organizations and to transfer to them the high ideals of the past.

The need for a new effort to adapt our education to meet the impact of technology and science has long been recognized. Forty years ago A. N. Whitehead, before the Mathematical Association in England, stated it as follows:

"When one considers in its length and in its breadth the importance of this question of the education of a nation's young, the broken lives, the defeated hopes, the national failures, which result from the frivolous inertia with which it is treated, it is difficult to restrain within oneself a savage rage. In the conditions of modern life the rule is absolute, the race which does not value trained intelligence is doomed. Not all your heroism, not all your social charm, not all your wit, not all your victories on land or at sea, can move back the finger of fate. Today we maintain ourselves. Tomorrow science will have moved forward yet one more step, and there will be no appeal from the judgment which will then be pronounced on the uneducated."

In response to the need, we must arrange to teach science effectively to as many as possible. We must interest our teachers in the industrial process by which we live. We must value the intellectual cycle which leads from ideas to machines and thence to ideas again. This combination of instruction, inspiration, and social support will be enough. The need for specialists may then be met without strain. Furthermore we shall liberate the creative energies of our people and, by so doing, raise our society to higher levels of achievement and culture.



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(Continued from page 203)



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Dehydrofrozen foods, the result of research by scientists of the U.S. Department of Agriculture, are new products with which the housewife comes in contact only indirectly at present, for they are sold to food processors who incorporate them into their products. Thus, many of the pimientos used in pimiento cheese are dehydrofrozen. The technique of dehydrofreezing is similar to conventional freezing procedures, except for a dehydration step interposed in the processing sequence just prior to packaging and freezing. Dehydrofreezing is designed to retain the advantages of both dehydration and freezing while eliminating, as far as possible, the disadvantages of each. Usually, the product is dehydrated to a 50 per cent weight reduction, then frozen and held in the same manner as frozen foods. Present production of dehydrofrozen foods consists of apples, apricots, pimientos, peas, carrots, and lima beans.

Dehydrated foods have chiefly been thought of as a wartime expedient for better transportation and less storage space. But today, the housewife is making use of many dehydrated products to ease her kitchen duties.

In 1945, during World War II, over 93,000,000 pounds of dried eggs were produced, mainly for military purposes. So far as the G.I. was concerned, these 93,000,000 pounds could well have been dumped into

(Continued on page 218)



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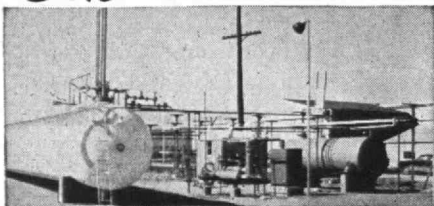




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## KITCHEN REVOLUTION

(Continued from page 216)

the sea without being missed as an article of the diet. The product was far from satisfactory. But the picture is different today. Research, both in England and the United States, has shown that one of the reasons for the impossible taste of dried eggs, was a chemical reaction between the sugar and the phospholipids in the eggs. It is easier to remove sugar than fats, and this is done by fermenting the sugars with yeast or certain bacteria, or breaking it down with enzymes. Eggs so treated remain quite stable when dried and are being used in dry cake mixes, and will even make a satisfactory scrambled egg or omelet.

Dehydrated potatoes that can be served as mashed potatoes by merely adding hot water or milk are on the market, and about 25,000,000 pounds were produced in 1954. The technique of production is more than simply powdering dried potatoes. Grinding ruptures the cell walls releasing the starch, and the mashed potatoes will have the consistency of wall-paper paste. However, if the potatoes are mashed when they have a moisture content of 40 to 50 per cent and then dried, there is very little cell rupturing and the dehydrated product can be whipped to give an acceptable mashed potato. To accomplish economical production of instant mashed potatoes on a commercial scale, required the application of considerable engineering science.

Dry nonfat milk solids have been on the market for years, but did not enjoy widespread use, chiefly because of difficulty in dispersing the product in water. A readily dispersible product is now available, brought about by the application of physical chemistry. Although details have not been revealed, it can be speculated that the process probably depends upon crystallization of lactose (milk sugar) in the alpha hydrate form. When this happens, the milk will cake and this cake can be ground and excess water removed to the point that the product will keep.

Among other dehydrated commodities besides milk, whey, coffee, fish, leavening yeast, fruits and vegetables—all familiar to the modern housewife—there are less familiar articles, such as molasses, honey, sugar sirups, steaks, small roasts, chops, salad dressing, vinegar, hard curd cheese, and beer. The last named is considered by many technologists as being only of academic interest at present.

(Concluded on page 220)

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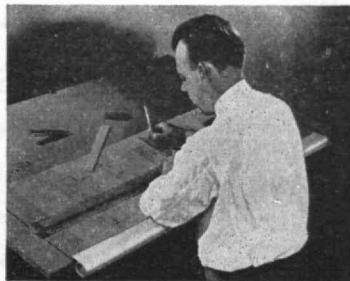
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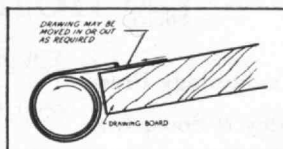


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## KITCHEN REVOLUTION

(Concluded from page 218)

How often our thoughts go back to the winter evenings of our childhood, when the old corn popper was taken from the kitchen cupboard and filled with just the right amount of corn. If you added too much, several unpopped kernels would be left and the puffed kernels would scorch. Then the popped kernels would be put into a big bowl with melted butter and salt, ready to serve the family. After it was over, mother would gather up the greasy dishes and take them to the kitchen to be washed, while we went up to bed with a satisfied stomach. Today, popcorn comes neatly wrapped in an aluminum foil container, complete with the correct amount of corn, butter, and salt. All that is necessary is to shake the dish over an electric or gas burner. An aluminum tent over the dish keeps the popped kernels from flying about. After the popped corn has been consumed, the dish is thrown away.

These have been a few of the technological contributions bringing about the kitchen revolution. The boundaries of technology are continually being pushed ahead, and there seems to be no ultimate limit to the march of research, for continual research progress is one of the characteristics of our modern Western civilization.

There are yet many problems presenting a challenge to the food technologist, the solution of which will further ease the tasks of the modern mother and make for better living. As examples of such problems may be mentioned: canned fruits and vegetables that look and taste like the fresh commodity and which can be stored at room temperatures without quality loss; means of prolonging the storage life of fresh fruits and vegetables, meats and poultry; a stable concentrated milk that upon reconstitution will taste like fresh fluid milk; a stable dry whole milk that will reconstitute quickly and taste like fresh milk; dehydrated meats and poultry that are stable at room temperature and will reconstitute to resemble the fresh commodity; a simple method for freezing shell eggs. These are but a few of the countless problems in food technology that beckon the research man.

Research never ends. As Alice was told by the Red Queen in *Through the Looking Glass*: "Now here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

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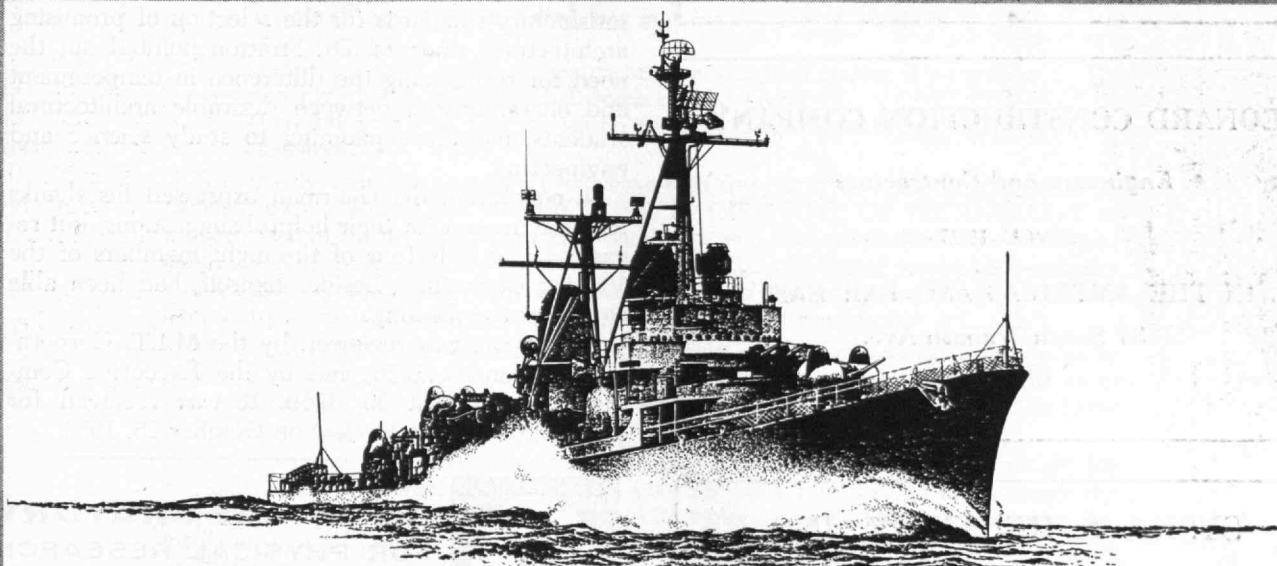


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## TREND OF AFFAIRS

(Concluded from page 196)

courses, lectures to the whole class are supplemented by conferences in small sections. These are utilized to enable the students to understand the style, structure, and planning of the buildings in question as illustrative of the civilization characterizing the periods in which they were built. Required reading, and essays illustrated by the individual students give effective application to these preparatory steps, and further provide much needed training in the expression of the students' ideas in black and white.

Such teaching of History of Architecture as well as the opportunity for students to acquire facility in sketching and in expressing their ideas graphically (in addition to their formal drawing) will add materially to the interest and enrichment of the School's curriculum.

The report of the *ad hoc* committee to study the Department of City and Regional Planning was discussed in some detail. It was strongly urged that a proposed Center for Urban and Regional Studies be made an integral part of the School of Architecture and Planning and be attached to no other branch of the Institute.

The luncheon period at the Harvard Club, which was extended well into the afternoon, provided an excellent opportunity for general discussion. As a guide to helpful suggestions in regard to the teaching program, approval was expressed for the idea of a survey, to be conducted among those who were graduated from the School since World War II.

Dean Belluschi outlined difficulties in determining satisfactory standards for the selection of promising architectural students. Dr. Stratton pointed out the need for recognizing the difference in temperament and characteristics between desirable architectural students and those planning to study science and engineering.

In conclusion the chairman expressed his thanks to those present for their helpful suggestions, but regretted that only four of the eight members of the Visiting Committee, besides himself, had been able to attend the meeting.

The report was reviewed by the M.I.T. Corporation on June 8, 1956, and by the Executive Committee on August 30, 1956. It was received for publication in *The Review* on October 25, 1956.



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and the prophet replied:

*"It is well to give when asked, but it is  
better to give unasked, through understanding." \**



## *Gifts by Will*

### TO THE Massachusetts Institute of Technology

The tale is told of Almustafa, the prophet, who, having awaited for many years the ship that would return him to the place from whence he came, was making the final descent to the shore when the folk of Orphalese crowded about him. They besought him before departing to "disclose us to ourselves, and tell us all that has been shown you of that which is between birth and death."

With words of wisdom, an answer appropriate was given to the woman holding a babe, to the ploughman, to the merchant. Begged one, "Speak to us of GIVING," and the prophet replied:

*"It is well to give when asked, but it is better to give unasked, through understanding;*

*And to the open-handed the search for one who shall receive is joy greater than giving. All you have shall some day be given;*

*Therefore give now, that the season of giving may be yours and not your inheritors."*

Through the years the prophet's words have held true, for even today he who "through understanding" includes the MASSACHUSETTS INSTITUTE OF TECHNOLOGY as a beneficiary in his will can experience thereby a two-fold satisfaction. The successful culmination of his search for a worthy recipient and the anticipated results his generosity will assist in accomplishing. These satisfactions give an added value to the span of man's days and project his usefulness to his fellowmen far into the future.

The Massachusetts Institute of Technology because of the high quality of the education given its students, its effective research work for aiding America in peace as well as in war, and the high character of its governing body and academic staff qualifies as an institution for serving our American ideals for the present and in the years to come.

But the search, the finding, and the anticipated accomplishments are not enough; for without the properly-worded record, man's plan for the future may go awry. Hence the prophet's importuning, "—give now," should be heeded. The giving need not be an immediate physical transaction, for written directions replace the spoken word when the speaker is no longer present, and a donor can frequently make by will a gift which is larger than he can make while living. Truly, *"it is well to give when asked, but it is better to give unasked, through understanding."*

A booklet "Gifts by Will," outlining different forms of bequests to M.I.T., is available to you or to your attorney by writing to:

Director of Development  
Massachusetts Institute of Technology  
Cambridge 39,  
Massachusetts

\* "The Prophet" by Kahlil Gibran



# ALUMNI AND OFFICERS IN THE NEWS

## New Posts . . .

In addition to the 17 Alumni elections and appointments recorded on page 192, other Alumni recently advanced are enumerated below:

ALBERT E. SAMPSON'15 and AZEL W. MACK'15 to president and vice-president respectively, of the Drysalters Club of New England . . . CHAPLIN TYLER'23 to membership on the Corporation of Northeastern University.

ALEXANDER SLEDGE'33 to professor of industrial engineering, Rutgers University . . . CHARLES M. HUNTER, JR., '41, to control manager of the Photo Products Department of E. I. du Pont de Nemours and Company, Parlin, N.J.

STANLEY BACKER'41 to the chairmanship, and JULIUS B. GOLDBERG'26 and MILTON M. PLATT'42 to membership on the Committee on Textile Fabrics of the National Academy of Sciences—National Research Council's Advisory Board on Quartermaster Research and Development.

RICHARD J. STEELE'46 to assistant to the president in charge of staff development, George Fry and Associates, Chicago . . . WILLIAM C. MENZIES'55 to technical director, Lowell Technological Research Foundation.

## Books . . .

*Sectional Properties of the Circular Fractions* by Monroe Ames'08. A handbook containing tables to find the values of every five degrees of arc for the three figures which can be designated circular fractions—the sector, the segment, and the fillet. (New York: Exposition Press, Inc., 1956, \$5.00.)

*Television Engineering Handbook* by Donald G. Fink'33. Covers the entire field of television technology, including the basic fundamentals as well as practical design data. Black-and-white and color television are discussed, and there are diagrams of the latest 21-inch color television receivers. (New York: McGraw-Hill Book Company, Inc., 1956, 1,520 pages, \$18.00. Text edition available.)

*High Pressure Technology* by Edward W. Comings'34. The central theme is the influence of elevated pressure on chemical and physical systems, and on the design of equipment for handling these systems, experimentally or on a commercial scale. For senior students of chemical engineering. (New York: McGraw-Hill Book Company, Inc., 1956, 572 pages, \$11.50.)

*Elementary Differential Equations* by William T. Martin, Professor of Mathematics and Head of the Department, and Eric Reissner'38, Professor of Mathematics. An elementary approach to differential equations in which the student attains an intuition for the subject before facing

the formal theorems and facts. (Cambridge, Mass.: Addison-Wesley Publishing Company, Inc., 1956, 260 pages, \$5.50.)

*Vacuum Tube Circuits and Transistors* by Lawrence B. Arguimbau, with transistor contributions by Richard B. Adler '43, Associate Professor of Electrical Communications. New material on transistors, color television, frequency modulation, and noise. (New York: John Wiley and Sons, Inc., 1956, 646 pages, \$10.25.)

*Mechanical Vibrations* by J. P. Den Hartog, Professor of Mechanical Engineering and Head of the Department. This book emphasizes the many applications of principles and calculations to the practical vibration problems encountered by the practicing engineer. (New York: McGraw-Hill Book Company, Inc., 1956, fourth edition, 436 pages, \$9.00.)

*Woodrow Wilson and the Politics of Morality* by John Morton Blum, Associate Professor of History. Deals with the training and career that brought President Wilson to one of the great crises of our time, when men were troubled by the immorality and corruption of American politics. (Boston, Mass.: Little Brown and Company, 1956, 215 pages, \$3.50.)

## Articles . . .

"The Geometry of Man-Made Landscape" (Part I) by Ralph Walker'11. An address, originally given at the Rhode Island School of Design, discussing the relation of architecture to its intimate landscape, and of geometry to both. (*Journal of the American Institute of Architects*, December 1956.)

"Xenon Arc Transients, Electrical and Optical" by Harold E. Edgerton'27, Professor of Electrical Measurements, and George W. LeCompte'55. The growth of the luminous area of a high current discharge in an electronic xenon-filled flashtube has been studied by means of a sequence of timed short-exposure photographs taken with a magneto-optic shutter. (*Journal of Applied Physics*, December 1956.)

"Broad-Range Magnetic Spectrograph" by Professor W. W. Buechner'35 of the Physics Department and Laboratory for Nuclear Science, and C. P. Browne. The design, construction, testing, and operation of the spectrograph are described, and plots of dispersion, magnification, aberration, and calibration are given. (*The Review of Scientific Instruments*, November 1956.)

"Marketing: Nuclear Instruments and Atomic Products" by Stanley L. Chaikind '50. New information about the industrial market for nuclear instruments and atomic products, and some practical guides for marketing planning. (*The Atomic Energy Guide-letter*, November 1, 1956.)

## Obituary

- WILSON H. LOW'86, August 10, 1956
- ARTHUR L. WILLISTON'89, November 16, 1956
- MORRIS A. PETERS'91, July 2, 1956\*
- C. HANCOCK WOOD'91, August 24, 1956\*
- HENRY W. GORE'93, October 22, 1956
- ARTHUR J. FARNSWORTH'94, October 8, 1956\*
- WALTER A. JANVRIN'94, July 10, 1954\*
- HARRY C. STARBIRD'94, December 8, 1956\*
- WALTER D. BLISS'95, May 9, 1956\*
- WILLIAM H. MCALPINE'96, November 1, 1956\*
- NATHAN C. GROVER'96, November 29, 1956\*
- LUZERNE S. COWLES'97, December 3, 1956\*
- LESTER D. GARDNER'98, November 23, 1956\*
- VAN RENSSELAER LANSINGH'98, November 16, 1956\*
- ERNEST F. RUSS'98, December 3, 1956\*
- EDGAR A. WEIMER'98, October 26, 1956\*†
- WILL R. PARKER'99, October 24, 1956\*
- JOHN L. PORTER'00, December 4, 1956\*
- JOHN H. FOSTER'04, September 6, 1956\*
- PERCY A. STAPLES'04, July 23, 1956†
- EDWARD H. LORENZ'05, October 28, 1956\*
- THOMAS F. LEARY'06, January 4, 1956\*
- PAUL S. SCHMIDT'06, July 6, 1956\*
- DEWITT M. TAYLOR'06, November 13, 1956\*
- CLEMENT J. DORE'08, November 20, 1956\*
- SCOTT H. GERITY'10, October 9, 1956\*
- HENRY F. MILLER'10, September 29, 1956\*
- LOUIS J. HARRIGAN'11, December 6, 1956\*
- ANDREW W. CARMICHAEL'13, November 12, 1956\*
- THOMAS R. COLLINS'13, October 27, 1956\*
- WILLIAM A. READY'13, November 20, 1956\*
- SAMUEL W. SELFRIDGE'13, July 16, 1956\*
- EDWARD E. SMITH'13, September 8, 1956\*
- DWIGHT P. THOMPSON'17, November 21, 1956
- VICTOR T. GIVOTOVSKY'19, October 13, 1956\*
- GRANT K. FRENCH'20, October 26, 1956\*
- LESLIE C. STEVENS'22, November 30, 1956\*
- WILLIAM B. WINGERT'23, November 14, 1956\*
- ALEXANDER BLACK'25, July 6, 1955\*
- IDA M. LEWIS'28, November 11, 1955\*
- JAMES M. SHOEMAKER'28, September 28, 1949\*
- W. SWEETZ CONKLIN'30, July 17, 1955\*
- ROBERT P. PARKER'32, date not stated\*
- FRANK W. SPEIR'32, July, 1956\*

\*Further information in Class Notes  
†Information in Central Pennsylvania notes

# NEWS FROM THE CLUBS AND CLASSES

## CLUB NOTES

### Birmingham

The M.I.T. Club of Birmingham held its annual meeting at the Club on the evening of December 4. Present were George B. Bradshaw'03, James G. Creveling'25, James R. Cudworth'21, George J. Fertig'24, Hubert Foreman'47, Lawrence T. Haugen'23, Prescott Kelly'13, Laurence D. Luey'29, Kenneth McDonald'24, Edwin B. Miller, Jr., '50, John Powers, Jr., '33, Merrill E. Pratt'16, James B. Preston'48, Ted Randolph'44, Joseph C. Reid'08, Amasa G. Smith'29, Nelson Smith'35, Raymond E. Strickland'38, Fernand C. Weiss'13, and John H. Wood'34. We had with us as our guest Robert A. Davis of Chicago Bridge, Birmingham, and our special visitor was Don Severance'38, Secretary of the Alumni Association.

Following dinner, President Fertig gave an account of the activities of the Educational Council in Alabama and, as some evidence of its work, read the roll of Alabama students now attending M.I.T. This list seems to be increasing annually, although the Freshman Class this year is some few short of Alabama men compared to the immediate past years. John Wood read a fine letter from an Alabama freshman who is the recipient of an Alumni Fund Scholarship.

Merrill Pratt reported the slate from the Nominating Committee, and George Fertig'24 and Nelson Smith'35 were respectively steam-rolled into repeat performances as president and secretary of the Club for 1957. President Fertig then formally introduced Don Severance, who gave us, in interesting detail, some of the aims and accomplishments of the several Institute clubs, associations and committees, whose interest is the advancement of M.I.T.'s service to education. We found this talk most beneficial, touching upon activities with which most of us had only a vague familiarity. Mr. Severance discussed the serious problems to be faced by M.I.T. and all institutions in enrollment growth anticipated for coming years.

We were all pleased and honored to have John T. Norton, Professor of the Physics of Metals, and Chairman of the M.I.T. Faculty, drop in upon our meeting and greet us. Professor Norton was (by an amazing coincidence) dining that evening at the same spot, following his conference with a group of local industrialists. After dinner, we were shown a film on the SAGE Project of the Lincoln Laboratories, which Mr. Severance had brought with him, following which he answered those questions which he could concerning the operation and extension of this project. Thus was concluded a very successful and interesting meeting.

— NELSON SMITH, *Secretary*, 1642 Brown Marx Building, Birmingham, Ala.

### Central Pennsylvania

An informal mixed dinner meeting of the M.I.T. Club of Central Pennsylvania was held on November 20, 1956, at the Harrisburg Y.M.C.A. Professor Emeritus Erwin H. Schell of the Institute staff gave a very entertaining talk on the status and objectives of Tech to a group of 34 members, their wives and guests. Among those present were Gardiner C. Wilson'15, presiding, Prentiss B. Alger'23, John P. Connelly'28, Charles H. Dolan'48, Karl E. Katz'50, E. Jonathan Leffler'51, Colonel N. M. Martin'38, Eldor J. Mink'22, John A. Morefield, Jr., '56, Robert K. Peterson'48, Harold Radcliffe'41, Charles W. Richards'21, Harold R. Spaans'30, Clifford J. Walton'14, and Andrew R. Brugnoni'26.

The Club mourns the loss of two of its oldest and most loyal members, Edgar A. Weimer'98, former mayor of Lebanon, Pa., and Percy A. Staples'04, former president of the Hershey Chocolate Corporation. Congratulations are due Samuel I. Zack'11, who was the recipient of the Laurie Prize for distinguished service to the science of civil engineering. A card of well wishes was signed and sent to Carleton Stewart'41, who was then in the Harrisburg Hospital recovering from an attack of polio. — ANDREW R. BRUGNONT, *Secretary*, 1706 Beckley Drive, New Cumberland, Pa.

### Hartford

Five programs are planned for this year's schedule. Our first meeting was held on October 23, at which Professor H. Guyford Stever, former chief scientist for the Air Force, spoke on guided missiles and the new aeronautics. In January, we planned to have a bull session beer party. On February 28, 1957, we are sponsoring a symposium on atomic energy. Ladies' Night will be held in April, and we are planning a family cook-out for our June annual meeting. — EDWARD D. KANE, *Secretary*, Cuno Engineering Corporation, Meriden, Conn.

### Milwaukee

Our Club's monthly luncheon meetings on the second Tuesday of every month continue to be well attended. We hope to have it a well recognized function so that any Tech Alumni in the area will feel free to gather with us at the University Club.

On October 18, a most successful meeting was held. Professor William Van Allan Clark, the guest speaker, spoke to our group and an excellent and enthusiastic group of representatives from the high schools. Our Educational Council did an excellent job in interesting a fine

group from the schools, and these men entered into the discussion with a real amount of sincere interest. Professor Clark spoke on "The Increasing Importance of Science in Industrial Management." The subject provoked an active discussion. On October 31, Joe Conrad, regional director for the Alumni Fund, had lunch with the officers of our Club and Jack Monday, Milwaukee's regional chairman for the 1957 Alumni Fund Drive. Returns from the address and business affiliation questionnaires that went out in September have been good, and the information thereon has been compiled. We hope to have a new directory for the Milwaukee area shortly after the first of the year. Plans were made for a Christmas vacation luncheon with those students home for vacation. — WILLIAM H. SCHIELD, JR., *Secretary*, M.I.T. Club of Milwaukee, 2723 E. Newton Avenue, Milwaukee 11, Wis.

### New London

The M.I.T. Club on the Thames held its first meeting of the season on November 29, 1956, at a dinner meeting at the Wagon Wheel Restaurant. Mr. Andrew I. McKay'21, Vice-president in charge of engineering research and design at the Electrical Boat Division of General Dynamics Corporation, is the first president of the recently formed club. Selection of the officers was announced by the nominating committee chairman, John Lewis. The rest of the slate is as follows: Russel Brown'42, Vice-president, and George J. Siefert'51, Secretary-Treasurer.

A talk was given by William Dennin of the M.I.T. Geology and Geophysics Department, substituting for Dr. Robert Shrock, head of the same department, who was unable to attend because of illness. Mr. Dennin's topic was "The Future of the Earth Sciences at M.I.T." He described the role of the geologist and geophysicist in unmasking the mysteries of the earth. During the question period, Dennin told of the various mineral deposits in the New England area, and explained the history of the rock formation peculiar to the Connecticut Valley. He was introduced by D. P. Severance, Secretary-Treasurer of the M.I.T. Alumni Association. G. J. Siefert was toastmaster of the meeting. — GEORGE J. SIEFERT, *Secretary*, 9 Laurel Drive, Groton, Conn.

### New York

The Club quarters are now being used rather extensively by various class groups and course groups to hold reunions and professional get-togethers. Our executive manager, Mr. Fred Parsons, will make the necessary arrangements, if you would like to have one for your own particular class or course. Mr. Parson can be reached at the M.I.T. Club of New York, Hotel Chatham, Vanderbilt Ave-



nue at 48th Street, New York City, N.Y. Telephone: Plaza 5-3094.

Mr. P. H. Littlefield, Vice-president of Canada Dry, recently held a luncheon for 11 members of the Class of '24 at our Club. We were also host to a group of 60 people at a dinner sponsored by Mr. Theodore M. Alfred. The dinner guests were members of an industrial management class of the Sloan Fellowship Industrial Management Program. The Sadless 50's, an Alumni group composed of members of the Classes of 1950 through 1956, used our Club facilities to hold a Dutch Treat Party.

The M.I.T. Club of New York now has close to 1,800 members, and will shortly distribute its annual directory, listing all names and addresses, to all members who have paid. This year, our directory will have 96 pages containing much valuable information. Alumni of the Institute are reminded that by becoming members, they will be included in the next publication of this widely circulated Club roster.

The Long Island Section of the M.I.T. Club is formulating plans for an interesting husband and wife activity for the month of February, at which there will be a guest speaker, well known in the travel circles.

The New York Club is planning a technical session to be held February 28. David Broudy'22, who was chairman of the automation meeting, will act as advisor to the committee, including Chairman Anton Hittl'36, J. F. Patterson'36, and T. W. Carmody'44. We are sure that this meeting will prove to be as interesting as the previous technical sessions on automation and rare metals.

The M.I.T. Club of New York cordially extends a warm welcome to all Alumni visiting our great city. Membership in the New York Club is still open, and applications can be obtained from Mr. Fred Parsons, Hotel Chatham, 48th Street at Vanderbilt Avenue, New York City. Ten dollars will buy you one year's membership in one of the fastest growing Alumni groups in the country. — HARVEY KRAM, *Secretary*, 101 Barnyard Lane, Roslyn Heights, L.I., N.Y.

## Northern Texas

The M.I.T. Club of Northern Texas (Dallas area) held its annual joint Christmas party with the M.I.T. Club of Fort Worth in the banquet room at Amon Carter Field on December 13. The evening began with a cocktail hour followed by a delicious roast chicken dinner. Good fellowship was enjoyed by all of the 90 Alumni, Alumnae, and spouses who attended. After dinner, President Ed Vetter introduced past presidents and other celebrities for the Dallas group, followed by Ralph Uhrmacher who did likewise for Fort Worth. Ed Travis of Fort Worth provided a 30-year-old Technology banner for the occasion, which was in amazingly good condition. Regrets were received by wire from Lobby and Conchita.

Three interesting films were shown. The first, "SAGE," covered the work of the M.I.T. Lincoln Laboratory. Later, two short films covering aeronautical sub-

jects in lighter vein closed a successful evening.

As a result of the departure of Dayton Clewell for bigger and better things in the East, Ed Vetter was elected to be our new president and the undersigned, secretary-treasurer. — R. L. LICHTEN, *Secretary-Treasurer*, 6338 Aberdeen Avenue, Dallas, Texas.

## Oklahoma

The second fall meeting of the M.I.T. Club of Oklahoma was held at the Petroleum Club of Tulsa on November 26, 1956. Following the showing of the film "500 Miles to Go" on last year's Indianapolis race, the various chairmen discussed plans for the forthcoming Regional Science Conference which will be held in Tulsa on Saturday, February 2, 1957.

Under the co-chairmanship of Walter S. Smith'30, and Bernard E. Groenewold'25, the following men have been picked to handle various phases of the Conference: Arrangements; John G. Burke'38. Attendance and Registration; Donal K. Holway'47. Hospitality; Scott W. Walker'40. Invitations; David A. Bartlett'39. Publicity; Erling O. J. Helland'40. Treasurer; Barrett B. Russell'43.

The following Alumni were present for the meeting: Carl H. Abel, Jr.'38, John G. Burke'38, Paul A. Cushman'11, Joseph B. Eisler'32, Arman F. Frederickson'47, Clifton G. Frye'47, Howard Grekel'47, Bernard E. Groenewold'25, Stanley J. Harshman'49, John Hawkins'48, Donal K. Holway'47, W. R. Holway'15, Karol L. Hujsak'47, Breene M. Kerr'51, Van B. Luong'55, Lyman W. Morgan'48, Richard Mungen'47, Robert L. Rorschach'43, Barrett B. Russell'43, William H. Shenkle'51, Daniel Silverman'29, Walter S. Smith'30, Vincent V. Valleroy'49, and Scott W. Walker'40. — BARRETT B. RUSSELL, *Secretary*, 4562 East 38th Place, Tulsa 5, Okla.

## Puerto Rico

The M.I.T. Club of Puerto Rico held its annual meeting at the Reserve Officers Beach Club, Puerta de Tierra, on December 1, 1956, from 12:00 noon to 7:00 P.M. Many Club members, their wives and children were present. After having discussed general matters, especially the selection of our Club delegation to the "M.I.T. Weekend in Havana," coming next February 23-25, and having lunched, we all stayed at the beach enjoying swimming. The main object of the meeting was the election of the members who will govern the Chapter for the year of 1957. The new board of directors elected was as follows: President, Ulises Barros Loubriel'55; Vice-president, Angel del Valle'43; Secretary, Antonio Kayanan'42; Treasurer, Telesforo Carrero'46, Orlando C. de Aragón'39; Antonio Romero'12; Manuel Viña Sorba'45, Past President. — ULISES BARROS LOUBRIEL, *Secretary*, P.O. Box 9447, Santurce, Puerto Rico.

## Puget Sound

The M.I.T. Club of Puget Sound held a most informative dinner meeting on

the evening of December 6 in Seattle. The subject, "Air Defense of the Pacific Northwest," was very ably presented by Colonel R. W. Burns, Deputy Commander for Operations, 25th Air Defense Division. He held great hope for substantial improvement in air defense efficiency through the use of SAGE. This system, he stated, utilizing the most modern electronic computing equipment, will strengthen the weakest links of our present methods — human computation and human transmission of ideas and information. In addition to Colonel Burns' talk, M.I.T. Lincoln Laboratory's excellent motion picture "SAGE" was shown.

Fifty-five Alumni were in attendance, and guests at the meeting included L. A. Wood, Vice-president and General Manager, Pilotless Aircraft Division, N. W. Grigg, Materiel Manager, Pilotless Aircraft Division, and Major E. E. Schleier, Air Force Operations Officer, all of Boeing Aircraft Company. In addition, the Club was very pleased to have three guests from M.I.T. Lincoln Laboratories; Dr. George Valley, Norman Taylor, and Robert Weiser. — WILLIAM D. SEWALL, *Secretary*, 6634 White-Henry-Stuart Building, Seattle 1, Wash.

## Southern California

On December 6, 1956, the M.I.T. Club of Southern California held its regular monthly dinner meeting at the Rodger Young Auditorium in Los Angeles. This meeting was the third of the Club's International Geophysical Year program. The interesting talk on "Cosmic Ray Activities" was given by Dr. Victor Neher, Professor of Physics, California Institute of Technology. Dr. Neher is a member of the United States Cosmic Ray Committee of the International Geophysical Year. Since 1932, his main field of research has been on cosmic rays. During his talk he showed colored movies which he had taken at Thule and other northern Greenland bases from which cosmic ray research is being conducted. The question session extended well into the night.

Alumni present at this meeting were: Hiram E. Beebe'10, A. Bertsch'46, A. S. Chivers'52, E. J. Cole'52, Bernard S. Coleman'19, James S. Cullison'41, Homer S. Davis'24, Roger Hayward'22, Jack Horner'41, Andrew Kay'40, Warner Knight'41, Samuel E. Lunden'21, David McKay'43, Jack Kourkene'48, R. Nicolait'44, J. R. O'Donald, D. Plummer'52, Lieutenant L. N. Reynolds'55, Leo A. Riley'55, William V. Schmiedeke'12, Conrad Skladal, Jr.'44, E. Stone'51, R. B. Stringfield'15, Anthony Thormin'27, Frank Verano'52, Robert L. Walquist'51, David O. Woodbury'21, and Jay Zeamer'40.

The M.I.T. Club of Southern California is planning to publish another Club directory in 1957. This will be the first since 1951, and will include 1,500 names, a 20 per cent increase over the 1951 edition. Don Severance has already been of help in this effort. This directory should be of considerable interest to firms in this area that sorely need technical personnel. The Club's annual meeting was held at the University Club in Los



Angeles on January 17, 1957. Commander Norville, of Admiral Byrd's South Polar Expedition fame, spoke on the International Geophysical Year. — JAY ZEAMER, *Secretary*, 8109 Creighton Avenue, Los Angeles 45, Calif.

## South Florida

Professor David A. Dudley, Associate Director of Admissions, was the guest speaker at a dinner meeting of the Club in the McAllister Hotel, Miami, on December 5, 1956. He was on a tour of Florida and Cuba to confer with high school students and teachers relative to prospective candidates for admission to the Institute. In an interesting and informative talk, he spoke of the increasing number of applicants, and the methods of screening them so that those who are admitted may be expected to complete their courses. He stated that character is at least as important a factor in the selection as scholarship, and that those of the admissions staff were, of necessity, learning to become pretty good psychiatrists. He also spoke of the necessity of enlarging the facilities of the Institute to take care of future enrollments, stating that the Institute does not favor imposing artificial barriers such as boosting the entrance requirements, which have not been changed in 25 years. His address was followed by a question and answer period.

At a business meeting preceding Professor Dudley's talk, the following officers were elected for the ensuing year: President, Kenneth P. Armstrong'10; First Vice-president, Scott J. Hoehn'47; Second Vice-president, Donald S. Whitmore'51; Third Vice-president (in charge of membership), Past President C. P. Thayer'23; Secretary, Donald L. Brown'51; Treasurer, Irving Steinhardt'48. Alumni present included Ralph C. Robinson'01, Kenneth P. Armstrong'10, Harold A. Smith'11, Robert S. Cook'21, Edward I. Mandell'21, Richard L. O'Donovan'27, Alexis B. Kononoff'29, Meyer A. Baskin'34, John J. Ostlund'35, Charles S. Symonds'35, Sidney Mank'37, Robert Nedbor'37, William Sussman'40, William L. Sammons'43, Scott J. Hoehn'47, Irving Steinhardt'48, Robert M. Williams'50, Donald S. Whitmore'51, Carl S. Conner'53 and David N. Leslie'54. Several of the members were accompanied by their wives. Mr. Mank brought his wife and teen-age son, and Mr. Leslie his mother and father. William Sussman, Retiring President, presided. — KENNETH P. ARMSTRONG, *President*, 145 Sesame Street, Opa-locka, Fla.

## Washington

A record turnout of about 100 people attended the November 29 meeting of the Club, held at the Cosmos Club. Featured as the after-dinner speaker at this meeting was Eger V. Murphree, Special Assistant for Guided Missiles in the Office of the Secretary of Defense, the "Guided Missile Czar" appointed by Mr. Wilson. Mr. Murphree discussed the general subject of Guided Missiles.

At the next meeting, held on January 29 at the Cosmos Club, we had as our

special guest, Professor Erwin H. Schell. Professor Schell is known to most of us as the head of M.I.T.'s School of Industrial Management and Course XV, Business and Engineering Administration. Professor Schell retired in 1955, and is now professor emeritus and lecturer. He is also a noted author, having published numerous articles and periodicals in his field, has served as a consultant to the Department of State in 1944, was awarded the Gilbreth Medal by the Society for the Advancement of Management, is a member of the Corporation of Simmons College, and is a director of Keystone Custodian Funds, Inc., located in Boston.

Something new that the Club sponsored this year was a Christmas Luncheon for M.I.T. students home for the holiday in the local area. This was held at the Army-Navy Club in Washington on December 28. Luncheon speaker was William R. Ahrendt'41, founder and President of the Ahrendt Instrument Company of College Park, Md. Bill is an authority on the development and manufacture of automatic control devices, and is a lecturer at the University of Maryland.

Nicholas Stathis'29, has been appointed membership committee chairman, and Paul Robinson'2-44, has been appointed secretary for the coming year. — CHESTER N. HASERT, *Secretary*, 1300 N. Scott Street, Arlington 9, Va. DOUG COOK, *Assistant Secretary*, 4305 Rosedale Avenue, Bethesda 14, Md.

## Women's Association

The M.I.T. Women's Association held a dinner meeting on December 5 at the Faculty Club to honor those of the women students who are candidates for degrees in 1957. Nine seniors or graduate students attended. Mr. James Kelso of the president's office made a few remarks on the current thinking of the administration with respect to the position of women students at the Institute. He was followed by John E. Arnold, Associate Professor of Mechanical Engineering, who described interestingly his course on "Creative Thinking" which was characterized in *Life* magazine (May 16, 1955) as "the course where students lose earthly shackles."

Our president, Phyllis Winter Grosswendt'42, announced that two of our Alumnae, Florence Fogler Buckland'20 and Beverly J. Beane'46, have been honored by receiving the award of the Women's Badge from the local chapter of Tau Beta Pi, the honorary engineering fraternity. Beverly was present to take a bow. We are very proud of these two women.

The White Elephant Sale held on November 7 was a lively affair which enriched our treasury by \$177. The committee is grateful to all who contributed to its success.

Our next meeting will be a Saturday luncheon on February 16. This is an opportunity for you out-of-towners to join us and learn about the activity in the field of music at M.I.T. — KATHERINE SALISBURY HAZEN, *Recording Secretary*, 81 Clark Street, Belmont 78, Mass.

# CLASS NOTES

1891

This is a letter from Horace L. P. Brand. It shows what Tech has done in starting a really gifted student on the right foot. Here it is:

"I entered M.I.T. because I found the most difficult course to take was in M.I.T., of those colleges from which I received catalogues. I selected Course II because I met a friend during the freshman year who was going to take Course II, and also because I thought I would succeed as a mechanical engineer. My recollections are that I studied hard, nearly every night, and I received H in every subject except once when I got an F in thermodynamics, and when I demonstrated about getting an F to the professor, he told me my paper deserved a C (credit), but I had H (honor) in every other subject, so he wanted me to take a second examination in the fall and try for an H. I did try in the fall, and I got an H.

"In my days, there was not much done in athletics. I remember I was on a second team (football) as center rush, and my chum was a guard. In a push, he was knocked down and out. I helped to carry him off the field. That ended my football career.

"After graduation, I followed engineering for several years, and I built a grain elevator with steel storage tanks — the first ever built — and after that and for many years, all grain elevators were modeled after my elevator. I think I was the first to build an ice house using air (stationary air) as the insulation substance, and the first to install a string of electric light bulbs in a cove at the ceiling, which cove was lined with mirrors, and the light was reflected from the ceiling, and this was the first 'indirect lighting.' The ice house was built at my summer home in Idlewild Estate, Sturgeon Bay, Wis., and the indirect lighting was installed in my residence on Wellington Avenue, Chicago.

"I quit engineering to help my ailing father. After his death, I became editor and publisher of German language newspapers in Chicago, and I succeeded in building a large circulation for my newspapers. The First World War forced me to quit that enterprise. I am now over 88 years old, still in good health, and active in the rare old coin business and real estate business. My biography is published in the *Encyclopedia Americana* biographical edition."

As far as Tech records go, he has spent his working life in Chicago, the sounding board in the center of a mighty nation during the period of its most rapid growth. We surviving members of the Class greet him with, "All hail, Brother!"

From the Alumni Register office comes the news of the death of C. Hancock Wood on August 24, 1956. His last address was Decatur, Ala. Also, the death of Morris A. Peters, Kure Beach, N.C., on July 2, 1956. From our President, Harry Young, I received this item: "Bequest received by Tech from the Estate of Edward W. Donn, Jr., donated to

Alumni Fund, \$6,937.50 in memory of Edward W. Donn, Jr." Mr. Donn died in August, 1953, and the fact was reported in Class of 1891 notes at that time. Does it seem appropriate to be reminded by his thoughtful gift, that when we make our will, a bequest to our *alma mater* will be a gracious act. — WILLIAM CHANNING BROWN, *Secretary*, 15 Forest Avenue, Hastings-on-Hudson, N.Y.

## 1894

Although these notes are written before December 25, it will be more than a month before they greet the reader's eye, so it is a trifle late to extend the secretary's Christmas wishes to members of the Class and all other readers. It is not too late, however, to wish for all a happy, healthy, and prosperous 1957. Your secretary is pleased to acknowledge, with hearty thanks, the season's greetings from Abbot, sent from Hyattsville, Md., Bean from Manchester, N.H., Chase from Danville, Va., Horton from Sandwich, Hunt from Portland, Me., Nowell from Hillsborough, Calif., Kimberly from Tryon, N.C., Owen from Newton, Sherman from Akron, O., and F. A. Schiertz, Boston.

Abbot also reported that he has finished building, mostly with hand tools, a one horsepower solar boiler which will be tested in the Engineering Department at the University of Arizona during January. His interest in matters of this kind is of long standing, and he was one of the first to engage in research in this field. He also reports that the chief of the weather bureau and seven of his staff recently spent several hours with him on his long-range weather forecasting, based on years of patient research, and showing an integrally established cycle of 270 months. ("See my 'Sixty Year Forecasts,' and my 'Periods Related to 273 months,' published in reports from the Astrophysical Laboratory of the Smithsonian Institution.")

In this traditionally happy period, it is with sorrow that there must also be reported the deaths of three of our Class members. Walter A. Janvrin died at his home in Revere on July 10, 1954. Only recently has news of his death reached the secretary. Janvrin was a student in civil engineering who left M.I.T. at the end of his third year, but was for many years thereafter engaged in civil engineering work in his home city. Harry C. Starbird, for two years with us as a student in electrical engineering, died on December 8, 1956. Unfortunately, the secretary can give no details of his career other than that he had been continuously a resident of Malden, and was engaged in business there. He never came to Class reunions, or responded to Class letters sent.

Arthur J. Farnsworth, who graduated with us in 1894, and was an electrical engineer, came to the Institute from Minneapolis, and later migrated to California. If the secretary is correct, he later studied patent law, and was associated with several companies in southern California. He retired more than ten years ago, and lived at Warner Springs not far from San Diego, but more recently had been a resident of Pasadena. The information that he had died on October 8, 1956, was received

from his brother, but it is regretted that an account of his long and interesting career cannot at this time be given. He will be remembered as a brilliant student, a member of Delta Kappa Epsilon, and interested in Class affairs during the years spent with us at M.I.T.

The years are taking their toll, and our fine Class of over 130 is now less than 30. — SAMUEL C. PRESCOTT, *Secretary*, Room 16-317, M.I.T., Cambridge 39, Mass.

## 1895

When your secretary receives information that another '95 mate has passed on, he is inclined to check his necrology records to learn just how many of the '95 graduates are still living. Our record shows 145 were graduated in 1895; 25 are still living and 120 are dead. Thus, 17.24 per cent are living and located in eight states. Massachusetts has 13, New York 4, California 3, and one each in Florida, New Hampshire, New Jersey, Ohio, and Virginia.

We received notice through the Alumni Register that Walter D. Bliss, Course IV, had passed on May 9, 1956. Our records show he was an architect in San Francisco and has lived there for many years. His architectural firm since 1927 was known as Bliss and Fairweather. George L. Bixby is now located at 5274 Riverside Drive, Columbus, Ohio. Dr. Joseph Walworth has taken his yearly trek to Florida, to the Lake Side Inn, Mt. Dora.

Our Class has received a cordial invitation from the M.I.T. Club of Cuba to attend "The First Weekend in Havana" on February 23 through 25, 1957. They are providing an enticing list of events, and if any of our mates are interested in attending they will experience a wonderful opportunity to see Havana. If you desire further information, write me. The registration fee is only \$35, and you will receive wonderful entertainment for it. — LUTHER K. YODER, *Secretary*, 69 Pleasant Street, Ayer, Mass.

## 1896

Marshall Leighton writes from Washington, where he is still active as a consulting engineer, of the death of William McAlpine, and of Nathan Grover. He has known for years of Bill's eminence in design for dams and hydraulic works, and says, "seldom, if ever, carried any personal flags." Grover died on November 29 in Washington, where he had lived during his service and since his retirement as chief hydraulic engineer of the United States Geological Survey. After graduation from the University of Maine, he and Harold Boardman joined us in the senior year of Course I. After six years of teaching, he joined the engineering force of the Geological Survey. He was with J. G. White Company of New York for a couple of years, after which he returned to the Survey, and from 1913 until his retirement in 1939, he was chief hydraulic engineer in charge of water resources branch. This branch of the Survey was developed during Grover's tenure, and of recent years has been of much public interest and concern, and also the subject of legal and political battles. "Mr.

Grover was a member of the American Geophysical Union, the American Society of Civil Engineers, the Washington Society of Engineers, the Cosmos Club, and the Tau Beta and Beta Theta Pi fraternities." Leighton mentions his conversation with Mrs. Grover during her husband's stay in the hospital. The Class sympathizes with her and feels the loss of a member who has so outstandingly distinguished himself and so reflected honor on the Class.

Just before Thanksgiving, the Yacht Club at Plymouth tendered Allan Villiers an informal reception when he came to view the harbor. He is to command a replica of the *Mayflower*, now being built in England, on its voyage to Plymouth, Mass., this coming summer. When he returned to the club from his inspection trip, it was noted that in the narrow part of the channel a fair wind would be required. To an Air Corps Wave's suggestion that a helicopter would furnish the wind, the Captain replied, "That is very interesting, but hardly in accord with the historical entrance I am to enact." Provincetown wants the ship to anchor there, as the Pilgrims did, but that is not proposed as yet. After a visit to several Atlantic seaports, the *Mayflower* is to be permanently docked at a site by the Eel River, two miles south of Plymouth Rock. — JAMES M. DRISCOLL, *Secretary*, 129 Walnut Street, Brookline 46, Mass. HENRY R. HEDGE, *Assistant Secretary*, 105 Rockwood Street, Brookline 46, Mass.

## 1897

In the July Review we quoted a letter from Irénée du Pont referring to a hobby of his in Cuba. In reply, we suggested that a few words about his hobby would be appreciated and of interest to his classmates. On November 8, he wrote: "I am glad that there is some hope of the boys getting together next June. So far as golf is concerned, mine has been perfected about as far as anything can be, but unfortunately, it is perfection in practicing all the bad habits, from looking up, lunging at the ball, etc. I think that at our age we would have more fun sitting around, talking over old times and having a drink together, than going in for exercise more suitable for an 18-year-old than an 80-year-old."

It will be noted that the hobby was not mentioned, so we tried once more, and under date of November 23 came the following: "Like most lazy people, I do not seek any effort that is not necessary, and my undertaking in Cuba is quite complicated and hard to describe. Essentially, I first thought that it would be well for me to acquire a place in the tropics as near Wilmington as possible, to spend my declining years. Looking on the map, I found the nearest place in the tropics to Wilmington, Del., was the Hicacos Peninsula, across Cárdenas Bay from the city of the same name. I made a trip down there with C. A. Meade, M.I.T.'94, and found a wilderness which seemed to have wonderful possibilities.

"Like all pioneering work, it would take much money to develop the property for any other use, but as a profit, it seemed to me that it would be some day a very



valuable property and a wonderful place for such old men as I am to join for a common purpose. The value of the land itself when I moved in was nothing compared with the cost of developing it. On top of this, we then had in Cuba six rather harmless revolutions, and on September 1, 1930, the peninsula was swept by a hurricane which destroyed substantially all the houses (purely courtesy, nothing but palm leaf shacks). Then, we had the years of Roosevelt depression, which would make anybody shy about investing out of the United States, not knowing if and when Mrs. Roosevelt would become 'Empress' of the world. Notwithstanding this, for many years I kept on improving, and then the good times began. People heard of Varadero, and the pressure became so great that I have sold off plots of ground to select people to build nice houses along that beautiful coast. I think we now have about 60 families living there, and my home, which was designed as an administration building to entertain prospective parties who would join me, is really getting to be like an old castle on the Rhine, a bit out of date. But the newcomers certainly have bargains, for at the ridiculously high price per square foot, there is great demand and more than the supply.

"I fear this year will be the first one in many that I have not spent a large part of the winter in Cuba, because my wife has a bad hip joint, and I am afraid she will not be as happy there as in earlier years, so that I will have to simply go down a week or two at a time, when opportunity presents itself. This is more of a letter of apology to you for not having endeavored to write up something which would be of interest to my classmates." I am sure that many of you have a hobby or two. Why not be articulate and tell us about them?

All members of the Class, I trust, received our circular letter of November 26 asking for news and suggestions regarding our 60th reunion. An early reply came from Henry W. Ballou, Providence, R. I., enclosing a generous contribution for the '97 Class Fund. Under date of November 30, 1956, he wrote the following: "Complying with your letter of November 26, I have not the slightest idea how many payments of Class dues I may have muffed. Accordingly, enclosed is my check for \$50 for the Class Fund. I hope that there will be a rousing good dinner for the ancients that may or may not show up. I suggest that it be held at the restaurant that I used to go to about 100 years ago when I was at M.I.T., to wit, Locke-Ober, Winter Place. I still go there when I am especially anxious for good food. They have excellent private dining rooms, of course. As yet, I have no known great, great grandchildren."

Bill Binley writes from Exeter, N. H.: "In reply to your letter of November 26, I trust someone has already called your attention to the employee magazine of Du Ponts, *Better Living*, of November-December 1956, on the front page of which is a very fine picture of Irénée du Pont, who is celebrating his 80th birthday December 21, 1956. On the inside pages are many pictures of Mr. du Pont and

his family, together with an account of his business career. You can obtain a copy by writing to Leavitt S. White, Editor, care of E. I. du Pont de Nemours and Company, Wilmington 8, Del. This issue is one of the finest I have ever seen.

"As regards the 60th reunion, I shall do my best to be present at any place at any time, and a luncheon in Boston or suburbs the day after Alumni Day would be fine. As Mrs. Binley has not been very well for some time, she probably would not be able to attend, if it were decided to invite wives."

The M.I.T. Club of Cuba is staging a three-day weekend program at Havana, beginning Friday, February 22, through Monday, February 25, to which all Alumni and their wives are invited. The registration fee of \$35 for all events may be sent to Sr. A. H. Rodriguez, Concordia 61, Havana, Cuba.

An enthusiastic and devoted member of our Class, Luzerne S. Cowles, died in his 81st year on December 3, 1956, in Newton Center, Mass. A faithful attendant at all Class functions over the years, he will be greatly missed. We hope to have further information to give you in a later issue. — JOHN P. ILSLEY, *Secretary Pro-tem*, 26 Columbine Road, Milton 87, Mass.

## 1898

This takes up the thread of the narrative, mentioned in the December '56 notes, which was interrupted for reasons that will presently appear.

My first visit was in Athens, Greece, with Gorham P. Stevens, who for many years was director of the American School of Classical Research in Athens, Greece, and more recently was associated with the work of excavation and reconstruction of the ancient Agora of Athens. Gorham called at the Hotel Grande Bretagne, where the Secretary and his sister were staying during a trip to Greece last February, and took us on an excursion through the Agora. Classmates will remember that President Edgerly was in Athens several years ago, in the course of an extended Mediterranean trip, and that Gorham also showed him through the Agora. Further, that Dan thereafter sent a letter to the Class describing the Agora. We will recapitulate a bit. The Agora was the market and assembly place of the ancient city. In it were numerous impressive buildings, including among others, a public library, law courts, an odeum or music hall, a city hall, several temples, the Stoa or arcade of Zeus, where Socrates taught, the Painted Stoa or Porch, where Zeno lectured to disciples, who thereby became known, because of their meeting place, as Stoics, and the Stoa of Attalus. The issue of *Life* of September 17, 1956 — pages 165-172 — gives a picture of the Agora in the days of its splendor with further interesting details. On this eight-acre square, the Athenians conducted their daily affairs from about 600 B.C. to 267 A.D. when barbarians destroyed much of the city.

The Temple of Hephaestus (Vulcan), called the Theseum, is the only building of the ancient Agora which escaped destruction and still stands today. We en-

tered the Agora, under Gorham's guidance, at the Theseum — similar in design to the Parthenon, with one less column longitudinally and one less horizontally — and then went from spot to spot, Gorham explaining which of the celebrated buildings of yore had occupied this and that spot, and finally came to the Stoa of Attalus, where all was activity. The Stoa was discovered through excavation at the Agora. The original colonnaded structure was erected during the reign of Attalus, King of Pergamum, Asia Minor (159-138 B.C.), in gratitude for the knowledge he had gained as a student in Athens. The Stoa of Attalus, which lay along the east side of the Agora, was a most splendid structure. It was 382 feet long, 64 feet wide, and had two stories, each with a row of 21 little shops set at the back of a column-studded promenade. In 1948, Dr. Homer A. Thompson, professor at the Institute for Advanced Studies, Princeton, N. J., who had started digging in the Agora in 1931, took seriously the idea of rebuilding the Stoa. It was this activity of rebuilding the Stoa that we noted. Gorham told us that the president of the board of trustees of the American School of Classical Studies in charge of the rebuilding, Ward M. Canaday, a businessman of Toledo, Ohio, had offered the workmen a bonus of \$300 each if they would finish the job so that the rebuilt Stoa could be dedicated in September, '56; and were they busy! The Stoa was lovely and impressive when we were in Athens in February, '56. It was completed and dedicated on time, as reported in the September 4, 1956, issue of the *New York Times*. Under the title "Rebuilt Stoa of Ancient Athens Dedicated," is a photo of the façade of the Stoa, and a relation of interesting facts. The issue of *Life* of September 17, above mentioned, gives an extended description, copiously and beautifully illustrated, of the Agora, and the rebuilding and dedication of the Stoa. The Stoa is situated below the Acropolis, the impressive hill-top fortress and sanctuary that dominates Athens' skyline.

The trip through the Agora being completed, we were ushered into the Museum and, fortunately, Professor Thompson was in his office. The building was full of archaeological treasures secured in excavating the Agora — statues, reconstructed vases, amphoras, *et al.* We were informed that it was intended eventually to transfer these collections to a new Museum in the Stoa. Professor Thompson showed us the process whereby 50 to 100 (more or less) bits of glass or pottery, dug up in excavating the Agora, are painstakingly fitted together, so that eventually a completed vase or amphora is produced. One object in the Museum is of particular interest to '98; a large scale model of the Acropolis showing the Parthenon and other famous buildings, skillfully modelled by Gorham P. Stevens. This masterpiece is universally admired. And so we returned to the hotel, after a delightful visit to the Athenian Agora. We will never forget Gorham's courtesy, nor his unobtrusive and deep knowledge of the history and art of Greece.

After a few days more in Athens, the Chapins flew to Cairo. First off, we drove



down to Giza, eight miles south of Cairo, to gaze spellbound at the Pyramids; then rode a camel from the first and largest, the Cheops pyramid, to the Sphinx, the enormous statue of Chephren, son of Cheops; then, after a delightful tea at the Mena House, back to the hotel in Cairo, where we found a message awaiting us from George Cottle. George and party had left East Boston a few days ahead of us, and our paths were crossing at Cairo. A delightful evening followed, comparing experiences and information. The next day, the Cottle party flew to Beirut, Lebanon, en route for Syria, Jordan and Israel. After a few days more in Cairo, the Chapins flew to Luxor — 500 miles south from Cairo, two hours by plane — and then in due course, after visiting the marvelous ruins, temples, and tombs of that region, returned to Cairo, and then visited Lebanon, Istanbul, returning to Athens as the jumping off place for visits to historic regions of Greece — Delphi, Olympia, Corinth and Crete. As the boy was taking us to our rooms at the Grande Bretagne, Athens, a voice came to our ears: "I don't believe a word of it," and there stood George Cottle; and the rooms of George and his sister were right adjoining our rooms! Well, we had another delightful visit, tea, dinner, and everything you can well imagine, comparing notes and experiences. What a thrill to meet an old friend in a foreign land! George has taken, as usual, some remarkable pictures, and perhaps we can coax him to show them at some get-together of '98. So much for meeting up with '98 classmates in the Middle East. Later, the narrative will embrace similar meetings, but at home in the U.S.A.

Dean Harrison's book, *What Man May Be*, appears in the "Selected List of 250 Outstanding Books of the Year," as published in the December 2, 1956, New York Times Book Review. The commentary is illuminating. "The following list of 250 books has been selected by the staff of the Book Review from the approximately 10,000 titles published this year."

Along a similar line, we have received, through the courtesy of the Alumni Association, a clipping from the *Independent Republican* of Gloucester, as follows:

"Babson Discusses: Child's Brain: If I have any real hobby, it is the study of the human brain. In fact, if I were to **live my life again**, I should devote myself to the development and harnessing of the human brain. Teaching Young School Children: Any school superintendent who insisted that first-grade children should be taught psychology would probably be called 'crazy.' On the other hand, I believe if he did not use this long word, but merely began in the early grades to teach the child about his own brain, he would be praised. After 12 years spent in the Gloucester public schools, and four years in M.I.T., I had never heard of psychology. Yet it seems only common sense to begin education by teaching a child about his own brain, with which he will learn everything in the years to follow. As so many children are starting their first formal education this month, I urge that their interest be aroused in the wonderful machine which every one of them has in his head. It makes me cross

to see the attention which is given by the press to the new electronic computers, while so little space is devoted to the human brain. In fact, Mr. Thomas J. Watson, late president of International Business Machines until his death a few weeks ago, once said to me, 'If one of my machines is worth a half million dollars, the brain which every child has is worth ten million dollars!'

"Brains Compared With Telephone Systems: Every child who has entered school this month has in his head the equivalent of three pounds of mental switchboards. These are connected by the equivalent of telephone wires to every part of the body. Whenever we touch anything, see anything, hear anything, smell any odor, a telephone message is immediately sent to our brain. There it is automatically directed to one of these switchboards, which in turn makes a permanent impression upon some part of the brain similar to the small circular impressions on a long-playing phonograph record. There are many such 'switchboards' with millions of plugs. The chief switchboards are in the following twelve: Desire — Instinct — Memory — Industry — Common Sense — Expediency — Reason — Inspiration — Imagination — Religious Faith — Hope — Love. These last three are the most important for the good of mankind. But from a business point of view, perhaps Industry, Common Sense, Inspiration, and Imagination will give school graduates the best salaries and job opportunities. In my business I am especially interested in getting people with keen imagination, who can correctly see into the future. I believe the great opportunities lie with those who have cultivated this power.

"How Our Brains Work: Each child possesses hundreds of thousands of living cells. Some are pressure-sensing cells; others are seeing, tasting, and smelling cells. All of these have 'private telephone' lines to the brain, which automatically transmit messages by the 'dial system,' to the right switchboard, which in turn makes the permanent record. I believe that children could become tremendously interested in their brains, and that this interest could add a hundred per cent to their educational results. Children are always interested in animals. When it is shown them that moths have smelling powers to find their mates several miles away; that the instinct switchboard in the heads of dogs enables them to find their way home and hunt out criminals; and that the robin on the lawn has far better eyesight than we have, children will wake up to their own precious possibilities. Children should be taught that in their heads they carry a telephone system with more private lines than the telephone systems of our largest cities. Getting children to use more of these thousands of private lines and dormant switchboards will make for healthy, happy, and prosperous lives. The real task facing our schools is not to develop more knowledge but rather more reason, self-control, and imagination. The ability to solve problems which have never yet been solved and to see more correctly into the future should be our real goals. I especially appeal for work with children because children can

learn more in the first 12 years than they will be able to in the next 40. My closing thought would be to impress upon these children the great importance of the switchboard entitled religion, with its sub-switchboards of Faith, Hope, and Love."

Toward the end of November we received in Boston the following telegram: "Lester Gardner died peacefully at 5:30 this morning in the Presbyterian Hospital. New York services on Monday at 12 noon Universal Funeral Chapel, Lexington Avenue at Fifty-Second Street, New York. Burial Arlington Cemetery from Fort Myer Chapel, Virginia, on Tuesday at 3:00. Kindly omit flowers. Request you act honorary pallbearer Fort Myer services. S. Paul Johnson, Director, I.A.S." The same telegram was sent to George T. Cottle at South Easton, Mass., and to Daniel W. Edgerly at Chicago, Ill. Others in the Class may have been advised similarly.

We were greatly surprised and upset, for in September we had spent an evening with Lester in his apartment, and he seemed in fine health and spirit; and less than ten days before the receipt of the telegram, we had received a letter from Lester, advising of his trip to Washington on account of the Collier's trophy, and stating that he had just received a fine report from a check-up at the hospital. Evidently, he had overdone in going to Washington. As George Cottle and the Secretary were entering the Universal Chapel in New York, we were joined by Dave Fenner. Thus, George, Dave, and the Secretary represented '98 at the New York services, which were simple and impressive.

These notes are being written on December 10, 1956. Within the past month we have received notices of the passing of three other classmates: Van Renselear Lansingh, Edgar A. Weimer and Ernest F. Russ.

Lester, prior to his decease, was preparing an up-to-date revision of the Roster of the Class. Following are recent changes of address which have come to the Secretary through the courtesy of the Alumni Association. Roger W. Babson, Mountain Lake Colony, Lake Wales, Fla.; Frederick C. Gilbert, 471 E. Johnston Avenue, Hemet, Calif.; Willis L. Learned, 35 Charles Street, Holliston, Mass. — EDWARD S. CHAPIN, Secretary, The Eliot, 370 Commonwealth Avenue, Boston 15, Mass.

1899

Will Rogers Parker, VI, died in Oakland, Calif., October 29, 1956, after a year's illness, according to a letter received from his wife, Inez Wright Parker. Will was a native of Lewiston, Maine, and came to the Institute from that city. Although he graduated in electrical engineering, he did not follow that profession, but spent a lifetime in advertising. He was connected with several of the larger advertising agencies in an executive capacity, and for 12 years before his retirement in 1949 was director of advertising with the Oakland Chamber of Commerce. Will leaves four daughters, three of whom are still living: Mrs. Betty Wilks of Harrison,

N.Y., Mrs. Constance Robinson of Piedmont, Calif., and Mrs. Barbara Reierstad of Boulder, Colo.; also five grandchildren. He was a loyal son of M.I.T., and though the width of a continent separated him from his *alma mater*, he always showed a strong interest in Tech affairs.

It is always a source of added satisfaction when your secretary can get in personal touch with a classmate and get a story through an interview. While at my sister's home in Melrose, Mass., for Thanksgiving, as is my usual custom, it occurred to me that Gardner Barry would most likely be at his sister Eleanor's home for the holiday. This proved to be the case, and I spent a delightful hour with them. Gardner is looking well, despite the strain of his wife's long illness and recent death. Since he is a near relative of my late wife, and my daughter-in-law's hobby is genealogy, Gardner, Eleanor, and I spent most of our available time together discussing their ancestry. I recommend it as an interesting avocation or hobby. For example: I have found that my maternal grandfather was born in Plymouth, Mass., in 1801. In tracing this line back, it became probable that this branch of the family came over in the second ship after the *Mayflower*. Another interesting fact is that my middle name (Ransom) occasionally occurs as far back as the middle of the 18th Century. Speaking of genealogies, we have two "Miles Standish," (Richmond and Merrill). Wonder if their progenitors and mine were acquainted?

This paragraph is a reminder that a class secretary can not supply notes for The Review unless he hears from his classmates. Obey that urge and drop a line. — BURT R. RICHARDS, *Secretary*, 173 Edgewood Avenue, Pleasantville, N.Y. MILES S. RICHMOND, *Assistant Secretary*, Little Compton, R.I.

## 1900

The following is taken from a first page story from the New Orleans *Times-Picayune* of December 5, 1956: "John Lewis Porter, a participant in the design and construction of initial water purification plants in New Orleans, and considered the dean of the state's sanitary engineers, died Tuesday at 9:40 A.M., at Touro infirmary. He was 78. At the time of his death, Mr. Porter was a civil and sanitary engineer with the firm of Fromherz Engineers. He resided at 8407 Panola. He was educated in the public schools of North Adams, Mass., and was graduated from M.I.T. in 1900. He was president of the M.I.T. Club of the South.

"After his graduation, Mr. Porter came to New Orleans on what he thought was a temporary assignment with the Sewerage and Water Board. He remained with the board for some 30 years and spent the remainder of his life in Louisiana. He came to investigate the feasibility and most economical method of purifying Mississippi river water. He later became assistant engineer with the board on design and construction of initial water purification plants for the city and, on their completion, was placed in charge of their operation and maintenance. In 1922 he was placed in charge of design and construction of extensions to the water

purification plants. Subsequently he joined the United States Public Health Service's bureau of sanitary engineering as assistant director of the state malaria program.

"He served from 1933 to 1938, a time when malaria was one of the most serious medical problems of the state. Mr. Porter was in charge of all malaria control drainage operations carried on by the various relief organizations. Later, in 1938, he was appointed assistant chief of the division of public health engineering of the Louisiana state board of health. He was engineering consultant on the local projects for water purification, sewerage, drainage, stream pollution and other major sanitation problems. As chief of the division's section of malaria control, he was in charge of drainage and insect eradication activities for control of the malady. From 1942 to 1946 he was state director of the project for malaria control in war areas.

"Mr. Porter retired from the Louisiana state department of health in June 1950, and malaria was no longer a major problem in Louisiana, thanks largely to the programs under his direction. The Louisiana Public Health Association awarded the Agnes Morris Memorial award to Mr. Porter for his long record of public service. He was one of the first to receive it.

"During his career, Mr. Porter also served as consulting engineer to the Celotex Company on water supply and purification, as well as on the design of a water purification plant for Amite and an incinerator plant at Houma. He served as referee chemical engineer on odor control studies in Jefferson parish conducted by the state board of health on industries there. He was associated with various consulting engineers on supervision of construction of Camp Sheridan at Montgomery, Ala., during World War I; design and supervision of drainage and sewerage facilities for Monroe, La., and Portsmouth, Va.; on the feasibility of bringing natural gas to New Orleans, and on a water purification plant for Donaldsonville, Marrero, East Jefferson Waterworks District No. 1, and Opelousas.

"Mr. Porter was past president and a life member of the Louisiana Engineering Society. He was a charter member and past president of the Louisiana section of the American Chemical Society. He belonged to the American Waterworks Association, the Southwest Waterworks Association, The American Public Health Association, and the National Malaria Society. He was a charter member of Osiris Lodge No. 300, F. and A. M., a charter member of the University Club, a charter member of the Engineers' Club of New Orleans, a member of the Round Table Club, and a charter member of the New Orleans Symphony Society and the old Philharmonic Society of New Orleans.

"Mr. Porter was the husband of the late Ethel Pope Fowler Porter. He is survived by his widow, the former Miss Nadine Hunter; three sons, John Lewis Porter, Jr., Arthur Clinton Porter, and David Fowler Porter; two daughters, Mrs. William B. French and Mrs. J. A. Snyder; one brother, Keyes Porter, and nine grandchildren."—ELBERT G. ALLEN, *Secretary*, 11 Richfield Road, West Newton 65, Mass.

Bert Sherman has contributed the following sketch of his activities and career upon request of Bob Williams, who canvassed Course V: "After a couple of years in three short jobs immediately after graduation, I started in business for myself in 1904 at the advanced age of 22. What a nerve I had! However, I persisted along those lines, commercial testing laboratories, part of the time by myself and part of the time with others for 45 years, except for about three years when I was in charge of inspection of the Construction Division of the Army in World War I, and then in charge of the Commercial Department of Arthur D. Little, Inc. My largest position, and the most gratifying, was with Skinner and Sherman, Inc., which Hervey Skinner '99, and Burton Philbrick of my own class started in 1921 after purchasing the good-will of the Boston Biochemical Laboratory, which Sam Prescott '94, owned, and which Burton directed.

"We carried on a commercial industrial laboratory business until 1949 when we sold our interests in the company, but with the intent to continue active in the management for a few years. I was the first to quit as I had a serious attack of bronchial pneumonia shortly afterwards, and was a long time in regaining my health. Now none of us are there.

"That is about it, professionally. When I could no longer continue active in the scientific field, I resigned from my various technical societies except the American Society for Testing Materials, which refused to accept my resignation. So I have continued on and am now striving to be the oldest living individual member. In 1954 the Society presented me with their gold certificate for 50 years membership. I had been the first chairman of the New England Section which was started some 15 years ago. My most active technical society work was with the American Council of Independent Laboratories of which I was president for two years.

"Now for some personal affairs. My first wife died in 1948, and a year and a half later I married again. All the married years of my life have been happy ones and, in all, they have covered 50 years. I have a daughter, Smith '31, and a son, Bowdoin '35. Each has three children so I have four granddaughters and two grandsons. My daughter's daughter, the oldest of the group, has just finished her freshman year at Wells College, while my son's daughter, the youngest, is but ten years old. I also have two step-sons, a step-daughter, and two step-grandchildren.

"Soon after my retirement in 1949, we decided that we would prefer to make our home in the South, and after a careful investigation, we decided on Sea Island. As you probably know, it is one of the most popular resort areas in the country, although that was not our main reason for buying a house here. What impressed us most was the beauty of the place, the wonderful planting and landscaping of the various properties, and the delightful people—especially those who use the place as winter homes. Aside from the first year we lived here, I have never known



the temperature to drop below 30, nor in the summer to rise above 95. And those are extremes. Winter here, as well as spring and fall, is ideal, but summer, while never reaching the high temperatures recorded in many places, has a steady heat, and worse, a steady high humidity. For that reason we try to go north for a few months each summer, alternating between St. Paul, where my daughter and family live, and the suburbs of Boston near our home and where my son and his family and my step-son live.

"We are seriously considering moving to Charlottesville, Va., which also has many charming people, country as scenic, but is very different, and has the great advantage to us of being a university town. I have seen only two of my classmates here; Louis Cates and Charlie Mixer, both of whom have been here a couple of times since we lived here."

Grant Taylor has written that he now considers that the *Saturday Evening Post* has now "arrived" since, in a recent issue, two '02 men are mentioned; namely Dan Patch and Henry Saylor. In the November 24 number, a letter from Dan calls attention to a mistake in the picture of a ship as referred to in the text, and Saylor is mentioned as taking an active interest in the restoration of the colonial mansion known as the "Octagon," which served as an interim White House after the burning of Washington by the British. I note with interest that Wade Wetmore has been elected vice-president of the Tech Association of Northern California. I am especially interested as one of the original members and as president for the year 1910. Don't forget our 55th, and if you have not already signaled your interest, drop me a card for details and any special information. — BURTON G. PHILBRICK, *Secretary*, 18 Ocean Avenue, Salem, Mass.

## 1903

We are happy to learn that "Ike" Atwood has accepted the nomination as Class representative to the Alumni Council for another term. Write your gripes or constructive suggestions to him at Newtowne Farm, Topsfield, Mass.

Our winter migrants to Florida are already renewing Class acquaintanceships. Hewitt Crosby writes from Sarasota of enjoying a visit from Gleason and Taylor '02 at Lido Beach and Jungle Gardens. Gilbert H. Gleason, Hotel TenEyck, St. Petersburg, Fla., is anxious to hear from any of the Class wintering in Florida in the hope of arranging for a winter reunion. From another part of the country: W. M. Gilker is now living at 4005 Winsor Parkway, Dallas 5, Texas. We would like to hear more, Bill. — LEROY B. GOULD, *Secretary*, 36 Oxford Road, Newton Centre 59, Mass.

## 1904

As these notes are written on December 11, 1956, items are scarcer than the proverbial hens' teeth. Therefore, it will not take you as long to read them as it takes me to write them.

I received a Christmas card dated November 21, stating that Everett and Mrs. Hiller have moved from their home in

Centerville, where Mrs. Hiller so graciously entertained our Class ladies at tea during the celebration of our 50th anniversary. Their new home is called "Bittersweet," and is a smaller place, but nearer the center of the village, and they like it very much. Their mail address is still Box 461, Centerville, Mass.

The card also brought me the disturbing information that as of November 26, 1956, Everett was starting his third week in the hospital with a coronary, but I received another note from Mrs. Hiller on December 11, in which she said: "Everett is improving markedly, and I expect him home from the hospital at the week before Christmas." This is indeed good to hear, and I hope that as you read these lines in February, he is sound and about, and feeling much better.

Gus Munster continues to improve, and in December he and Mrs. Munster took a two-day trip to New York City, where Gus attended the meeting and dinner of a railroad men's association of which he is a member. So I am sure he is improving. A telephone call to Dave Sutton's residence shows that he also is continuing to feel better and goes to Boston to his office very often now.

I learned that Farnum Rockwood is now preparing for his annual trip to Florida, and as you read these notes, he is probably there and basking in the Florida sunshine.

I have learned from Mrs. John H. Foster, via Louis Bouscaren, that her husband, who was our classmate John H. Foster, Course V, passed away in September, 1956. He lived in Concord, N. H. Our belated sympathy goes to Mrs. Foster. That seems to be all the Class news I have for this time, and I am sorry the amount is so small. — HENRY W. STEVENS, *Secretary*, 1082 Commonwealth Avenue, Boston 15, Mass.

## 1905

When I sat down to write the notes for the January issue, I found in my file just one item, and that a death. Since one of my faithful reporters has reminded me to keep my news on a brighter scale, I put the file away, hoping for a better supply for this issue. Fortunately, the crop is a little better this time. Through the Alumni Association I have a change of address for Daniels, which means that he has finished his "chore" in Judea and is back at his home, 5816 Vassar Avenue, Seattle, Wash. Perhaps at our 55th we can get him to tell of his interesting, probably consecrated life there.

Bobby Burns writes that he had another operation on his mouth last May, "not a malignancy," for the removal of a split gland, losing a piece of his tongue. Maybe he has lost a bit of burr. He and Mrs. Burns have left for Florida, where he would like to see any classmates travelling that way. Address: Walter Burns, 313-323 South Atlantic Avenue, Strickland-Shangri-La Apartments, Daytona Beach, Fla. Through Claude Anderson's daughter we learn that Andy is in a very bad physical condition, with little hope of recovery. Classmates near Philadelphia might give him a bit of cheer. Address is 6142 Wayne Avenue, Germantown, Pa.

Gladys Webster, on a Christmas card, tells us that Frank is still confined to his bed, progress slow.

Not very cheery news so far. Ski Lombard, President of the Institute of Applied Citizenship of New York, says that on a visit to Lawrence Blodgett '06 at Horse Shoe, N. C., he delivered a lecture of his favorite subject to the combined forces of the Rotary and Kiwanis Clubs at Hendersonville, N. C. Ski believes that some of his classmates, retired and seeking a hobby, would get a kick out of his hobby. When I was in London I tried to locate Ralph Whitcomb, from whom we have not heard for many years. Perhaps some real close friend of 50-plus years could get a rise out of him by writing. His address is c/o White, Drummond and Company, Ltd., 9 Cloak Lane, Common Street, London.

Edward H. Lorenz, II, died in Hartford, Conn., on October 28, 1956. Everyone remembers Ed for his athletic prowess at M.I.T. and also for his genuine friendliness. He was a member of Alpha Chi Rho fraternity and Phi Beta Kappa. In Hartford, where he had been employed ever since graduation, he secured several major patents in glass manufacturing equipment. He was a member of the Asylum Hill Congregational Church, Farmington Country Club, University Club of Hartford, Hartford Engineering Club, Appalachian Mountain Club, and the Board of Directors of the Hartford String Orchestra. He left a son, a daughter, and four grandchildren. — FRED W. GOLDTHWAIT, *Secretary*, 274 Franklin Street, Boston, Mass. GILBERT S. TOWER, *Assistant Secretary*, 35 N. Main Street, Cohasset, Mass.

## 1906

The January Class notes contained a report of the induction into office of Judge Martha Ware, and attending the ceremony, her parents and several friends. Well, Martha has plenty of friends, as on November 26 she was honored at a testimonial dinner attended by more than 400, and was presented a volume of annotated laws, a jewelled pen, and a guest book containing the names of all the guests. Any other lawyers among the children?

Having started some mention of the letters and notations received before reunion, you may be interested to hear from the rest even at this late date. In Course I, Brigadier General C. Eugene Fogg sent regrets, as did four more in Course II, variously with greetings, best wishes, etc.; Karl Juengling, Harold Ingraham, Henry Patterson and Louis Tripp. Then add to the Course III list James Buchanan and Walter deStiguer, and in IV, Charles Loring, who thinks "the first 50 years are the hardest." In his letter to Jim, George Shingler, V, refers to various undergraduate events we all fondly remember, and concluded with this item for the record: "The Florida Forestry Association awarded me the award for distinguished service last fall, while in the employ of the government, for devising means for recouping losses from forest fires. Give the chemists especially my very best regards and well wishes for a very



pleasant get-together." Lawrence Stone, VI, had a note on his registration sheet: "Sorry I will be unable to attend. Have been retired since 1950, and am enjoying a busy leisure in Florida. Regards to all the Class, and hope the reunion will be a happy success." It sure was, Laurie, and we missed you.

In Course VII, one of the replies to Andy Kerr's letters was from Dick Ham-matt, retired some years now from the U. S. Forestry Service, and living in Santa Rosa, Calif. "Your general chairmanship (in connection with the Plymouth Plantation Restoration) sounds both interesting and appealing. My nearest approach to it is to run back (to original Spanish grant) the chain of title to land on which our Junior College stands. Sorry I cannot make it back for our reunion, but I'm tied up here with two grandchildren, whom I have promised to take trout fishing in country where I was forest supervisor 40 years ago. [Would that be around Sisson in Siskiyou County?] Was back on the Cape — South Orleans — visiting my brother and sister, and sailing on Pleasant Bay, last September (1955), after losing Mrs. Hammatt. Then 10 days with old friends in Washington, D. C." Andy also heard from Miss Sarah Potter of Charlestown, N. H., who said she had only taken a course in landscape horticulture under John George Jack, an instructor at that time, one afternoon a week while she was a full-time teacher in the Girls High in Boston. "Have very poor eyesight and am almost 91 years old." Nice to hear from you, Miss Potter, and hope we will again at our 55th and 60th. Freeman Scales, now retired and living in Amherst, was sorry he could not attend and added: "Will send a greeting later." Don't forget, Freeman, and make it the long, newsy letter that warms the heart of a class secretary.

Of Course VIII, Henry Hubbell, some years retired and living in Conway, N. H., wrote Jim he was sorry, etc. Henry had attended the 40th with Walter Clifford, and they had planned a get-together at our 50th, but Walter had passed on (in '51), and Henry had earlier expected to come alone. Henry was at Tech only the first two years. "Rheumatic fever knocked me out, or so it was diagnosed — probably incorrectly, as I never experienced any of the usual aftereffects. Anyway, I lost 50 pounds and was six months getting it back, and never returned, which I regret." Jimmy Banash, my only surviving coursemate in Electrochemistry, and now still consulting in Los Angeles, wrote me, "No, I can't get to the reunion — wish I could," and added, "I'll try to write you in greater detail one of these days." Try hard, Jim, and I'll also be waiting for that telephone call when you get back to Boston!

Reporting on the contacts he had made before reunion, Leavitt Bent, X, wrote: "Bill Walsh and Phil Sadler are definitely coming (but Phil didn't make it), and Colby Dill wants very much to come and is going to try. However, he has already celebrated his 1903 Harvard 50th and, with a big farm on his hands, is not too optimistic." Oscar (Stod) Pulman is another example, and there are many in every class, of that divided allegiance and

loyalty, having graduated and taught at Yale several years before coming to Tech. In Course XI, which was well represented at reunion, Sam Greeley also planned to come, but for some reason couldn't make it. Of the 19 living members of XIII, the only registration sheet returned — with a no — was from Andrew Bell. Of the naval constructors, Rear Admiral C. W. Fisher said no, and Jim had a nice note from Captain Robert D. Gatewood: "Many thanks for all the trouble you've taken to make it easy for the Class of '06 to attend the 50th reunion. I regret exceedingly that I shall be unable to be there, and hope you will extend my best wishes to all who do attend for a most successful occasion." Several who have no specific course affiliation were heard from: Ogden Adams was sorry, as he would be away; James H. Kidder had had a stroke, and his wife added a note saying he was in the Convalescent Hospital in Charleston; Mrs. Thanish said no; and Knight W. Wheeler, in a note to Jim, said that for reasons of health he "would be unable to have the pleasure of attending," and sent his "heartly greetings and best wishes to all the members who show up."

Thus endeth the reunion chronicle, and thanks are due, for helping to make the get-together so successful by writing compelling letters and telephoning to coursemates, to Terrell Bartlett, Charlie Shapleigh, Dick McKay, Henry Darling, Jack Norton, Sid Carr, Bill Cady, Otto Blackwell, Andy Kerr, and Leavitt Bent — a total of nearly 80 contacts that we know of. Jim and I promptly replied to most of the letters and notations, and if any have been overlooked, they are here gratefully acknowledged.

To date (December 9), notice of the death of four classmates has been received, and letters of sympathy have been sent. Thomas F. Leary died January 4, 1956, but it had not been recorded until last October when his widow notified the Alumni Office. Thomas was with the Class only freshman year, had always lived in South Weymouth, and had business connections in Boston. A delayed notice was likewise received from the widow of Paul S. Schmidt, II, who died July 6, 1956, in East Cleveland. Paul was born in Cleveland, December 31, 1882, prepared at the Central High School, and came to Tech with a B.S. from Case. He was a member of the Ohio Club and the Mechanical Engineering Society, and his thesis, with Karl Juengling, was on "Tests on Boilers Employing Natural and Forced Drafts." For a few years he was concrete engineer with Courtney Engineering Company in Cleveland, and since 1910 until his retirement a few years ago, has been on his own as a structural engineer with an office in Cleveland.

DeWitt McClure Taylor, II, was born September 8, 1883, in Pittsburgh, and prepared at Shadyside Academy. At Tech he was a member of the Pennsy Club, Mandolin Club, and the Mechanical Engineering Society, and his thesis, with T. G. Webber, was "Tests of the Pumping Station at Wellesley." After a few years as an engineer and salesman in steam heating, he came back to the Institute as an instructor in mechanical engineering in 1915 and was one of the

group, under Professor Miller, which started there in July, 1917, the U.S. Shipping Board School for Merchant Marine Engineer Officers. It was one of several which (like the schools for training in navigation under Dean Burton) were the brainchild of Henry Howard '89, who had been appointed director of the recruiting service by the Shipping Board (see pages 30 to 37 in *Technology War Record* for the outstanding job these schools did in helping to man that mushroom fleet).

Incidentally, it's strange how history repeats itself, or in this instance perhaps it isn't, for in one issue of the Boston *Herald* (December 10, 1956) these two headings appear: "M.I.T. to Train Specialists in Navy Program — Technicians Sought for Nuclear Warfare in Big Changeover" and "M.I.T. to Study New Approach to Teaching Science." To continue about Taylor, he was an associate editor of *Power*, then in business in Wollaston and Boston for several years, in 1935 going to Vancouver at the University of British Columbia in the Department of Mechanical and Electrical Engineering. No record from 1940 except for the few years when he was engineering-editor with Jackson and Moreland in the Boston office. He married Dorothy C. Hersome in 1906, and also leaves a daughter, Miss Margaret C. Taylor of Boston.

Another Course II man, Harry Wheeler Brown, died on November 19, stricken with a heart attack as he was about to check out of the Palmer House in Chicago. For a clipping from a Greenwich paper we are indebted to Floid Fuller, who with Frances went to Greenwich on November 23 to attend the funeral and see Harry's wife, as Floid has been one of Harry's most intimate friends during and since Tech. Harry was born in Allston, July 17, 1884, and prepared at Boston Latin, was a member of the Mechanical Engineering Society, and his thesis, with Herb Ball, was "Plant Test at the Blackstone Manufacturing Company." Not being satisfied with one degree, he stayed two more years to get another one in Course VI. After a couple years as assistant engineer with D. C. and W. B. Jackson, Harry joined the American Agricultural Chemical Company, becoming assistant engineer in the Boston Engineering Department office (and when he left in 1916 to become general superintendent of the Michigan Carbon Works in Detroit, yours truly slipped into the vacancy). He joined Postum in Battle Creek as assistant general superintendent in '23, was general superintendent by 1930 and, after consolidation with other subsidiaries to form General Foods Corporation, was in the head office in New York, becoming manager of Eastern Plants. In 1940, Harry was with Corn Industries Research Foundation, and for the past eight years has been a consulting engineer with office in New York. Besides his wife, Pearle McDuffie, he leaves a son, Russell Wheeler, two grandchildren, and also a sister, Miss Edith Brown of Boston, whom he probably visited over the weekend when he and Mrs. Brown came for the Friday and Monday doings at reunion. Malcolm Wight's widow, in a letter thanking Jim for his letter of sympathy

and his and Alma's attendance at the memorial service, went on to say that she had "three wonderful children and seven grandchildren, as well as many good friends to sustain and comfort me through this difficult readjustment. Malcolm was looking forward to attending the reunion, and I know how much he would have enjoyed meeting many old friends and classmates." Your secretary has reason to know of Malcolm's sterling qualities, and his constant and loyal interest in M.I.T. and the Class, as he was a fellow townsman for nearly 15 years, and later we met regularly at Council meetings which he attended as the representative of the Hartford Club.

As these notes are completed (December 10), I look out upon that surpassingly beautiful New England winter scene — pines, spruces, firs, and hemlocks drooping under their load of yesterday's wet snow, while the oaks, elms, and maples gleam and glitter in the sun as the snow melts off and frees the frozen rain that coated every branch and twig — a picture no camera can adequately record, nor colored postcard duplicate. Verily, winter hath its charms! — EDWARD B. ROWE, *Secretary-Treasurer*, 11 Cushing Road, Wellesley Hills 82, Mass.

## 1907

Here are excerpts from a letter written to the sales force, foremen, and factory office personnel of Ilg Electric Ventilating Company by John Frank, our classmate, and chairman of the board of that company, entitled "Impressions from a Trip to Italy and Greece," made by John and his wife during the fall of 1956: "Our trip started inauspiciously. Our scheduled 5:00 P.M. flight from New York was cancelled, and we transferred to another that left at 8:00. Two hundred miles beyond Gander, Newfoundland, one engine conked out and we turned back to Gander to wait for another plane. Finally, after more delays, we reached our objective, Milan, 28 hours late! However, that was the end of our mishaps because the rest of our trip was perfection. In Milan we saw the wondrous Milan Cathedral, with its 4,000 statues; the superbly beautiful painting, 'The Last Supper,' by Leonardo da Vinci; and had lunch at Ginniano's Restaurant, with its immaculate glass-enclosed kitchen and magnificent food. . . . Two days at Lake Como in Italy, then on to Verona by auto. Verona has a surprising arena, built in the first century A.D., and perfectly preserved, except for the outer wall, and still used for plays and concerts.

"At Venice you arrive in a spot, remote from the center of the city, where land transportation stops. You become an amphibian, scooting to your hotel in a motor boat, skipping to Harry's Bar Restaurant at Torcello for lunch, leisurely gondoliering along the Grand Canal and the endless small canals, and then walking miles on dry land through the bewitching streets. With 450 islands, 650 canals, Venice must be seen to be believed. The Doge's Palace has a room 145 feet by 75 feet with no supporting columns that scoops Mies Van der Rohe's unobstructed Architectural Building at Illinois Tech by

many centuries. Is St. Marco Square in Venice the most visited spot in the world? It may be, because every tourist goes there every day, and everybody in Venice goes there, as all principal streets lead into it, and every little Venetian, from the age of one, feeds corn to the pigeons.

"In Ravenna we had the good fortune to have a very scholarly lady guide who really thrilled us with the history and romance of the city. In the 14th Century it was the great port of the Adriatic, but it is now seven miles from the sea, and an ancient church that has sunk ten feet has a leaning tower that is making Pisa jealous! . . . Now this you won't believe! Four years ago, with our daughter Patsy, we were at the Buca Lapi, one of the famous restaurants in Florence. There was a night of singing and we asked the violinist if he could play 'The Stein Song.' We went back a few days later and he had it and played it. Now, four years later, the same violinist is at Buca Lapi and he remembered us and we sang 'The Stein Song' with gusto, joined by a famous ex-opera star. . . . From Florence we motored to Pisa and were surprised to find a large replica of Mr. Ilg's tower in Chicago! The tower leans 13½ feet, just enough to allow Galileo to perform his famous experiment, showing that a lead ball and a feather drop at the same rate of speed. . . . On the TWA plane from New York to Milan, there were people from Buenos Aires, Morocco, Cairo, Ireland, Switzerland, Paris, Australia, Canada, as well as various Americans. With our 28-hour delay we became bosom pals with all of them! Mrs. Frank jabbered with them in French and German.

"Western Europe is A.D., Greece is B.C. Before you go to Greece you have to refresh your mythology and your memories of the gods, and also be ready to go back 1,000 years before Christ and imagine yourself a citizen of Athens. We had as our guide, philosopher, and friend, Bill Costopoulos, a graduate in archeology and history, and a most intelligent and attractive young man. We spent 17 days with him, and I believe we saw Athens and the isles of Greece as they should be seen. Bill took us sailing, flying, and motoring. We drove to Marathon, the seat of a famous Athenian victory over the Persians in 490 B.C.; to Lindos to see the Acropolis (which simply means 'high city'); nine hours by ship to Mykonos; thence to Delos, an ancient buried city, the mythical birthplace of Apollo. We flew to Rhodes and stopped at the 'Roses,' built by Mussolini. He must have wanted to impress his guests, because our room was so big it could cloud up and rain in it! We motored to Olympia, crossing the Corinth Canal that separates the Peloponnesus from the mainland of Greece, and saw one of the world's great art treasures, the statue of Hermes by Praxiteles. Then on to Delphi, the seat of the famous Oracle of Apollo, where the gods and humans went to ask about the future. Near Delphi there is an olive grove that stretches for 30 miles, with beautiful gray-green trees with gnarled trunks, many of them 400 to 600 years old. . . . By plane to Crete to visit the ruins of Knossos, the great palace of King Minos, which covers five acres, much of

it in good state of preservation. . . . The Greeks have a deep hatred of the British because of Cyprus, whereas Americans are received with open arms. . . . From Greece a fast flight to Paris, via Rome and Milan, with the feeling that we had had an intense course in archeology, mythology, and history. . . . From Paris we skipped to London, by early morning flight. We saw a very poor play by Noel Coward, 'Nude With Purple Violin,' on November 10, and on Armistice Day we were in beautiful Trafalgar Square, along with everybody else in London, for the inspiring 11 o'clock ceremony. We paid our respects to Westminster Abbey and then packed for home."

While we are on the subject of travel, Floyd ("Narry") Naramore wrote to me in December saying that he was planning on a journey to the South Pacific (Tahiti, Samoa, Fiji, and New Zealand) in February. He hopes to be back in time to attend our 50-year reunion. Also, Merton Sage and his wife are taking the Caronia World Cruise, having left New York on January 19, due to return on May 7. This is their third world cruise on this boat. Merton writes: "Barring the unforeseen, I expect to be present for the entire week end of June 7 to 10 for '07 and M.I.T. Alumni events."

Merton also told me of the very sudden death, on last September 1, of Hugh Pastoriza's wife while at a family picnic lunch, Hugh's home address is 10 Oriole Avenue, Bronxville 8, N. Y. And "Bill" Egan sent me a clipping from the Wakefield (Mass.) *Daily Item* of December 5, 1956, telling of the death of Marion Grant Lee, wife of our classmate, Ed Lee, in New Mexico, where they had lived for several years on account of Mrs. Lee's health condition. Both Ed and his wife formerly lived in Wakefield. Our sympathy goes out to these two classmates. I wrote to them on behalf of our Class.

John Bradley retired as metallurgist with American Brass Company about a year ago. His home is at 469 Farmington Avenue, Waterbury 10, Conn. A friendly note from "Hud" Hastings received last December stated that he continued to be very busy with Y.M.C.A. and church affairs, and that during last summer he played nine holes of golf about five times a week. (He must be getting in shape for golf at Oyster Harbors Club next June 7 to 9 at our 50-year Reunion!) When you are reading these notes, this reunion will be only about four months in the future, and you will soon be receiving definite announcements of details regarding it from me, with registration papers, etc. Here's hoping that you'll make your replies prompt and favorable! Also that you will continue to remember and take action on our 50-Year Gift Fund to the Institute and on the M.I.T. Alumni Fund. — BRYANT NICHOLS, *Secretary*, 23 Leland Road, Whitinsville, Mass. PHILIP B. WALKER, *Assistant Secretary*, 18 Summit Street, Whitinsville, Mass.

## 1908

The third dinner meeting of our Class for the 1956-1957 season will be held on Wednesday, March 6, 1957, at the M.I.T. Faculty Club, 50 Memorial Drive, Cam-



bridge, Mass., at 6:00 P.M. Try to be with us, won't you? We can promise you a good time. Dick and Margaret Collins celebrated their 40th Anniversary at their home in North Eastham, Mass., on October 27, 1956. The party was given by their children and grandchildren, with some 35 to 40 well-wishers attending, including Leslie and Helen Ellis, and George and Edith Belcher. An ample supply of champagne, shrimp hors d'oeuvres, cheese tidbits, and so forth, helped to make the party a grand success.

The November 1956 issue of *The Sentinel*, published by the Factory Insurance Association, contained a very interesting illustrated story of what The Farley and Loetscher Manufacturing Company of Dubuque, Iowa, have done to safeguard their plant from fire. Jimmie Burch, who is president of that company, should be complimented on the installation of such an efficient exhaust system for removing dust, shavings, and refuse, thus minimizing one of the inherent hazards of a wood-working plant. Dick Collins and George Belcher celebrated their 70th birthdays with a small party at the Old Thatcher House, South Yarmouth, Mass., on November 6, 1956. Guests included neighbors of the Belchers at Harwich, Mass. Dick says, "A good time was had by all."

Am sorry to report the death of Clement J. Dore at his home in Auburndale, Mass., on November 20, 1956. Have you made your subscription to the 1957 Alumni Fund? If not, there's no time like the present. Remember, all '08 subscriptions count toward our 50th-Year Gift to the Institute. So please be generous. H. A. S. N.? — H. LESTON CARTER, Secretary, 14 Roslyn Road, Waban 68, Mass. LESLIE B. ELLIS, Assistant Secretary, 230 Melrose Street, Melrose 76, Mass.

## 1909

We regret that there were no 1909 notes in the January number, for we just don't like to skip a single month. However, no items were received so we were newsless. This month, thanks to several contributors, we are doing much better. Art Morrill, XI, is one of our most generous contributors of news items, and he has our many thanks. In the November number we included an excerpt of a letter which he had sent to Art Shaw, I. My reply to his letter was delayed in the mailing since my secretary, who is a smart Boston University sophomore, had not become familiar with foreign air-mail postage, and the letter was returned twice for more stamps.

This is the prelude to Art's letter, which was dated October 24: "It was good to get your letter of September 24 which arrived this morning. I took much longer than letters usually do partly because of the professorial habit of dating letters September 24 and mailing them October 5. But it must also have had hard luck on shipboard. Air-mail letters come in two or three days. If you and Muriel cruise the Caribbean again, you should come on the Grace Line, where you touch at La Guaira, the port of Caracas. Then I can meet you and bring you 'up the hill,'

which is quite a road, rising 3,000 feet in ten miles with one tunnel a mile long. Going down, my car just about makes the speed limit of 50 miles an hour with no gas except the idle.

"I used to think that Caracas had the dubious distinction of being the most expensive place in the world, but maybe now we are not so bad. With prices going up in the U. S. and going down here, they are getting closer together. Restaurant and hotel meals are surely cheaper here now than five years ago, unless it is because I know better where to go and what to order. There is a large immigration here of Italians and Spaniards, and they have improved the restaurant situation, being good at the business and increasing the competition. When my wife first came to Caracas, she thought it was funny to see big men drinking demitasses of coffee, which is more common than having a Coke in Caracas. There are at least five places within a hundred yards of the door of our office building. In my favorite spot, you sit at a neat modern table and a pleasant Italian woman makes your coffee to order on an Italian 'expresso' machine. What I can't understand is how the U. S. can have atomic bombs and Salk vaccine but no expresso machines. One reason I want you to come to Venezuela is to tell me what reactance is. I am working on the ground-water supply of Maracaibo and am booking up on the transmissivity and coefficient of storage of the aquifer, which I never understood before. But reactance is still way over my head. My wife went back to Detroit two weeks ago, so I am now in my old bach semester. I hope to spend three weeks in the U. S. at Christmas as usual."

As many of you know, Lewis Nisbet is like the birds — he migrates north every spring and south every fall. We received a postcard from him with the winter address: Route 1, Box 22, Nokomis, Fla., stating, "just roaming around." His is an ideal way to retire.

Bob Glancy, VI, who, you remember, was at the 45th reunion, has sent the following: "I retired about four years ago and dropped mental exercise to build a ranch house and waste my time and deteriorated muscles on 1.3 acres of land which needs plenty of enrichment to develop good soil. I had 250 dahlias this year, plus some annuals like marigolds and zinnias, a few roses, tulips, hundreds of daffodils, and raised beans, limas, beets, corn, cabbages, tomatoes, and peppers." Bob's address is 606 Williamsburg Drive, Broomall, Pa.

The Alumni Office received a note from Dave Marvin, XIII, requesting that his address be changed from San Diego, Calif., to 501 San Andreas Street, Alamo, N. M. He goes on to say: "My wife, the former Cathryn Williams of Seattle, died November 2, and I am staying with my daughter, Mrs. Gilbert W. Hofeller, here. I had a stroke in August, 1955, and am recovering, but still type-write with a left forefinger, and hobble about. Perhaps this dry New Mexico air will benefit me after living at sea level at my house, 'Quiet Cove,' four feet above high tide on San Diego Bay. I left the Institute in 1909, and entered the Coast

Guard, serving 13 years on both coasts and in the Bering Sea. I joined the Navy in 1920, but was recalled to the Coast Guard to serve during the Rum War as head of the Department of English and History at the Coast Guard Academy (New London) from 1927 to 1934. I came back to California and was recalled again for war work at San Francisco. But I've quit the sea, I guess, now up here among the brown, dry mountains. It's been an interesting life! Maybe my Class secretary would like this?"

We have written several times concerning Barnaby C. Keeney, who is now President of Brown University and the son of Bob, III. He again came to the attention of your secretary at the Harvard-Brown game played in the Harvard Stadium. It is customary to have in the program the photographs of the presidents of the institutions of the two contending teams, and Barnaby's photograph appeared along with that of President Pusey. In addition, there was an outstanding article by Barnaby, "Responsibilities of Providing an Education," an address which he delivered on September 17 at the opening convocation of Brown's 193d academic year. He dwelt on the problem of providing for the increasingly large number of students who are already pressing the institutions of higher learning. He deplored the philosophy of "credit hours" which has been proposed; for example, cutting the course to three years, and keeping students in classes from 8:00 to 5:00. This, he said, "ignores the necessity for study and contemplation," and opportunity for "thought, discussing, discarding and selecting again." The problem of numbers would in part be solved by admitting only students who were qualified to pursue higher education.

We sent the program to Bob, who replied: "Thank you very much for sending me the program of the Harvard-Brown game with your nice letter of November 20. As usual we saw the Colgate-Brown game in Providence on Thanksgiving, which, to my surprise, Brown won. As their best backs are sophomores, they'll probably have a good team next year. I was interested to see the photograph of Harvard's seven housemasters in the Program. Barnaby was tutor at Lowell House under Perkins in 1938-1939. Mr. and Mrs. Perkins were at his wedding in Hartford in 1941, but I haven't seen him or his picture since. Your comments on the article by Barnaby were sent to him, as he will appreciate them. Haven't seen any '09 men since the 45th reunion, but get together quite often with Harry Rapelye '08, and Alice, who now live in Essex, Conn. When we do, it's like Old Home Week, for Alice was at Miss Wheelock's during Technology days, and all three of us graduated from Hartford Public High School (the second oldest secondary school in the country — 1638) at about the same time." — CHESTER L. DAWES, Secretary, Pierce Hall, Harvard University, Cambridge 38, Mass. HARVEY S. PARDEE, Assistant Secretary, 10445 Johanna Avenue, Sunland, Calif. MAURICE R. SCHARFF, Assistant Secretary, 250 East 43rd Street, New York 17, N. Y. GEORGE E. WALLIS, Assistant Secretary, Wenham, Mass.



I wrote the Class notes for the last issue of The Review before they were due as I was taking a short vacation. As a result, some of the news of this issue is a month late. My short vacation was an auto trip by back roads through New York, Pennsylvania, Maryland and Virginia. I made a stop at New Bern, N.C., where I was consultant for the restoration of the Tryon Palace or the Capitol Building of Colonial North Carolina. Then I had to stop at Williamsburg, where my firm has been consultant for 28 years on restorations and new work. It was a little strenuous, but both Mrs. Cleverdon and I enjoyed the trip.

It is with deep regret that I have to announce the passing of Scott Gerity on October 9, 1956. Scott had retired from the practice of architecture and was living in Los Angeles.

Also Henry Miller, who had retired and was living in Florida when he passed away September 29, 1956. The following is from the Wakefield, Mass., *Independent*: "Henry F. Miller, a member of one of Wakefield's most prominent families of years ago, a direct descendant of Revolutionary patriots and grandson of the founder of the one-time Henry F. Miller Sons Piano Company of Wakefield, died suddenly of a heart attack in St. Petersburg, Fla., about 11:00 P.M. Saturday, September 29. He was 69 years of age. Mr. Miller had had a winter home in St. Petersburg for many years, and went to that city to reside permanently when he retired about four years ago. He was the son of the late Edwin C. Miller and Ida (Farr) Miller, and was a native of Wakefield. His father was the fourth son of the founder of the once-famous piano business which was established in 1863 and which came to what is still known as the Miller Building, rear of the town hall, in 1884. After graduation from M.I.T., Henry Miller became associated with the business and later, in 1916, bought a piano factory in Franklin, but continued association with the Wakefield firm for some time. He had been retired, but previously was manufacturer's agent for a machine tools concern."

I have just received my annual letter from Louis French of Milwaukee. He has been working on fuel injection systems for engineers and has taken out several patents. John Gray has just returned from a very interesting trip in Europe. He traveled through Italy, Switzerland, France and England. Kenneth Armstrong, who is retired and living in Opa-locka, Fla., has been elected president of the M.I.T. Club of South Florida.

I had a short letter from V. T. H. Bien asking for a copy of the MITTEN, and a promise of a letter for the Class notes. Hal Manson and I had a very pleasant evening together at the last Alumni Council Meeting. — HERBERT S. CLEVERDON, Secretary, 120 Tremont Street, Boston, Mass.

## 1911

Within 11 weeks of his wife Margaret's death (as reported in last month's 1911 notes), Louis Harrigan, XI, was stricken

with a heart attack as he got off a Beverly-Boston commuter train in North Station, Boston, December 6, and was pronounced dead upon arrival at Massachusetts General Hospital. A native of Beverly, where he lived all his life, Louis prepared for M.I.T. at Phillips Exeter Academy, and in our undergraduate days, he was an active member of the Exeter Club and the civil engineering and biological societies. He served after graduation for more than two decades as a transit engineer for the City of Boston, save for army service with the New York militia in World War I. He also served with the Coast Guard Auxiliary in World War II.

He saw service in later years with the Massachusetts Department of Public Works, and served for a number of years as public works commissioner of the City of Beverly. He was an ardent yachtsman and a member of the Jubilee Yacht Club of Beverly. He leaves a son, John L., of Beverly, Charlie McManus, I, and Art Leary, XI, represented the Class at the funeral. Just two weeks before his sudden death, a letter of thanks for our condolence at his wife's death told of his grief, but he added: "I continue to be employed with the U. S. Army Engineers at their Causeway Street Boston office and that helps a lot."

Lester Gardner '98, one of aviation's stalwarts, and founder of the Institute of Aeronautical Science, who died just before Thanksgiving, was accorded a funeral at Arlington Cemetery in Washington, with full military honors. Aleck Yereance, I, sent a clipping from the Washington *Star* of November 24, listing our own Admiral Luis deFlores, II, as among the honorary pallbearers. Aleck said he and Edna had just returned from Middleburgh, N.Y., where they helped his father celebrate his 90th birthday, adding facetiously: "I wonder if we'll have a 90th Class reunion?"

Oberlin Clark, II, of Milton, reports there were seven Eleveners at the gala 50-year reunion of the Class of 1907 of Mechanic Arts High School, at the University Club, Boston, November 16. Suren "Bog" Stevens, IV, was chairman of the affair, and there were two other Boston area '11-ers present; Sam Blum, VI, Boston, Charlie McManus, I, from Beverly, and Ed Sisson, I, from East Boston. Jim Duffy, VI, flew on from Chicago, as did Paul Cushman, VI, from Oklahoma City. This represented about a fifth of the 34 present, and Clarkie said each gave a two-minute story of his life's work, and four of the teachers they had spoke briefly.

Fred Daniels, VI, chairman of the board, Riley Stoker Corporation, Worcester, and a life trustee of Worcester Polytechnic Institute, heads the special gifts division in a fund-raising program started December 1 by W.P.I. to finance a \$5,500,000 development program announced last June. Jim and Toni Campbell, I, were the only Eleveners present at this year's annual dinner of the M.I.T. Club of New York at the Biltmore in mid-November, at which President Kilian was the principal speaker. The Club's Silver Stein Award went to Dr. Alfred P. Sloan, Jr., '95.

At the annual assembly of the Massachusetts Council of Churches in Brockton in mid-November, Albert O. Wilson, Jr., '38, of Lexington, son of our Al Wilson, I, was elected treasurer. Young Al is associated with his dad in the Albert O. Wilson Structural Company in Cambridge.

The Class of 1911 did pretty well in the leaflet sent to all Alumni in early December with Alumni President Ted Miller's fine letter of year end greeting. There was a reproduction of the picture of Howard Williams, XI, which appeared in *Fortune* when he and his son acquired the Erwin Wasey advertising agency in Manhattan; a paragraph re O. W. Stewart, I, on his activities in the cultivated blueberry field; mention of the doctorate of laws which Carl Ell, XI, received from Emerson College; and the achievement award the American Waterworks Association gave to Bill Orchard, XI. These were gleanings from 1956 class notes and, incidentally, those sanitary engineering guys seem to make their mark, don't they?

Invitations are just at hand for the first "M.I.T. Weekend in Havana," which the M.I.T. Club of Cuba is lining up for February 23 through 25. It looks like a wonderful party, and if any of you classmates attend, please "write to Dennie" about it for use in future class notes.

Bob Haslam, X, and his wife opened their house they built last year in Sarasota just before Thanksgiving for this season. They plan to stay until the middle of May, save for occasional business trips Bob may make to New York. Ed Kruckemeyer, IV, partner of Charlie Strong, IV, in the successful architectural firm of Kruckemeyer and Strong, 1824 Carew Tower, Cincinnati, Ohio, is now a suburbanite, his new address being 354 Compton Hills Drive, Wyoming 15, Ohio. Then there is Ed Pugsley, VI, of New Haven, Conn., now located for the winter season at P. O. Box 396, Monticello, Fla., while Bill Davis, I, has gone countryward from his intown location, and is now at 6301 Powhatan Avenue, Norfolk 8, Va., and Cleon Johnson, X, has moved from Ridgewood to 24 Colonial Drive, Wyckoff, N.J.

Christmas cards are beginning to arrive, and one from Bob Morse, VI, retired, advises a new mailing address: 28 Constantino Place, Summit, N.J. He wrote: "Margaret and I have sold our house in Summit and relocated there for the winter months. This year we have also remodeled the old house in Sandwich, on Cape Cod, which we have been using summers for many years. It is 126 years old, and we have kept adding improvements, including central heating this year, so now it has everything, almost, and is quite comfortable even in winter. We'll divide our time between Summit and Sandwich. I have done a little consulting work since I retired, but not much. Most of my time has been spent on the Sandwich house — lots of fun, despite occasional headaches. Some day we may live in it year 'round!"

Happy Valentine's Day to you all, and be sure you keep that New Year's resolution you made to "write to Dennie." As these notes are being written this

second Sunday in December, we are having our first real snow of the season here in eastern Massachusetts, although our neighbors to the north and west have had several pretty good snowfalls already. — ORVILLE B. DENISON, *Secretary*, Chamber of Commerce, Framingham, Mass. JOHN A. HERLIHY, *Assistant Secretary*, 588 Riverside Avenue, Medford 55, Mass.

## 1912

Word has just reached me of the death of Marion Lenaerts, who passed away in Hyannis on November 16. John is now spending the winter in Dora, Fla., and would be delighted to see any of his old friends who happened to be in that area this winter. Our deepest sympathy is extended to him.

Albion Davis, who retired several years ago and then served a several year term with the Government in renegotiation work at Boston, again retired after doing what he considered to be his duty. His retirement was short-lived, however, for he is now comptroller of the Algonquin Club in Boston. The Algonquin is the swanky retreat for Boston's Back Bay, and Albion is working in close cooperation with the general manager to see that income exceeds out-go. Albion has just achieved an appointment on the M.I.T. Alumni Council and reports that the Council meetings are very interesting. — F. J. SHEPARD, JR., *Secretary*, 125 Walnut Street, Watertown, Mass.

## 1913

It has happened: The Class of 1913 has lost its most beloved Class President and fellow classmate; the Ready family a devoted husband and father; the town of Weston a loyal citizen; the Church a devout follower and supporter; the World a pioneer and associate of the electronics industry.

We quote from a local newspaper:

"William A. Ready, 68, electronic pioneer and retired president of the National Company, Inc., of Malden, died yesterday at his home, 85 Chestnut St., Weston.

"A native of Nashville, Tenn., and a graduate of Massachusetts Institute of Technology, Class of 1913, he began his career with Stone & Webster Co., and later became associated with the United Fruit Co.

"He joined the National Company in 1915 and became president of the firm in 1922, holding that position until he retired in 1954. During the 32 years he headed the company it supplied a large amount of communications equipment to the Navy, particularly during World War II. The company also developed many new innovations in the field of communications.

"During his career as a business executive and electronics leader he was associated as a president or director of a number of industrial and electronics firms.

"He was president of the Ames Shovel and Tool Co., 1928-1933; a director and chief engineer of the Ames Baldwin Wyoming Co., 1931-1937; president and director, Manufacturing Engineers Corp.;

Browning Laboratory; Malden Realty Company; The Sanborn Company; Judson Thompson Company, and the Ames Company.

"He was a member of the Alumni Council of M.I.T. and permanent president of the Class of 1913. He was also a member of the American Institute of Electrical Engineers, Institute of Radio Engineers; the Engineering Society of Boston and the National Rifle Association. He also belonged to the Brae Burn Country Club.

"He leaves his wife, Mrs. Neva (Haynes) Ready, and two daughters, Mrs. John Reed Baine of Weston, and Mrs. Charles Christian Hornbostel, and a son, William P. Ready.

"Funeral services were held Friday from Waterman's Funeral Home, Wellesley, with a high mass of requiem in St. Julia's Church, Weston at 10 A.M."

Many of his former friends, associates, and classmates attended the impressive ceremonies, a high requiem mass at the St. Julia's Church in Weston on Friday, November 23, 1956. Mere words and expressions cannot express the feelings we all have experienced when we realize that "Pop" will not greet us again with that wonderful smile, wit, sage advice, good humor no matter how tough the going. Let's all bow our heads for a few moments and offer a prayer to the Almighty for the safe arrival in heaven for our leader, Bill Ready. The real feelings of the Class and those closest to him is best exemplified by the note received from his wife, Neva: "May I, through you, express my sincere thanks for the lovely flowers. Seeing Al suffer for so long, we could not wish him back, but the emptiness that his passing has left in our home is almost unbearable. His wonderful spirit has always been an inspiration to me, and I am sure the happy memories will help me carry on." Amen.

The Alumni Council has appointed Ed Cameron as chairman, and he has selected Bill Mattson, Joe MacKinnon and Phil Capen to prepare a resolution to commemorate our never-forgotten friend and classmate, William A. Ready. The Class of 1913 was represented by Mr. and Mrs. Gordon Howie, Mr. and Mrs. Ellis Brewster, Mr. and Mrs. Edward Hurst, William Mattson, William N. Eichorn, Charles Thompson, and George P. Capen.

Your scribe had the pleasure of spending a couple of days in New York with our executive vice-president, Charles Thompson. During our visit we enjoyed a very pleasant and satisfying dinner with the Capen daughters, Janet Capen, and Mrs. Frank W. Smith at the home of Dr. Frank W. Smith, Jr., M.I.T. '49, X, Sc.D., in Hackensack, N.J., also attending a monster rally of the New York M.I.T. Club on Thursday evening, October 4, 1956. A good time was had by all. We met many old friends, but the Thirties were conspicuous by their absence.

A letter has been received from Professor A. L. Townsend and we quote in part: "George Clark, who has been chief engineer for the Formica Company in Cincinnati, has been extremely ill recently. I learned that he is in the Good Samaritan Hospital in Cincinnati." Why don't some of you fellows or fraternity brothers send George a note or a card? Get well soon,

my boy, for we are looking forward to seeing you at our 45th Reunion as promised.

With the greatest regret, we must announce the death of our classmate, Andrew W. Carmichael '13A, on November 12, 1956. We have only those meager facts. If any of his former friends or classmates can furnish more detailed information we shall be very glad to enlighten the rest of the Class. Again, we bow our heads in sorrow with the passing of another loyal classmate and fellow of Course X, Tom Collins, and we quote: "Scituate, October 27. Thomas R. Collins, 66, of 91 Clapp Road, retired Newark, N. J., manager of the Pittsburgh Plate Glass Company, was found dead today at his home. Mr. Collins' wife, Mrs. Katherine L. (Cahill) Collins, is a patient at the Massachusetts Memorial Hospital. A native of Everett, he was a graduate of M.I.T., a member of the Holy Name Society of St. Mary's of the Nativity, Scituate, and a member of the Civil Defense Corps here. He leaves, in addition to his wife, two daughters, Mrs. Andrew Ribsam, of Chambersburg, Pa., and Barbara A., of East Orange, N. J." To Tom's family we extend our most heartfelt sympathy, and we shall miss him at our next reunion.

We have received a breezy note from Earle R. Lincoln, X, in which he states he has sent us a draft for five dollars, and it has been received. Thanks from all of us, Earle. This might be the right time to remind the rest of you tired and retired readers that another year has rolled around, and 1958 will be our 45th Reunion year. We expect to hear from you. We need your news. When you write include your dues for 1957. Charity begins at home. You can't take it with you.

Another very sad announcement. This one from Fred Murdock: "Too bad about good Wood Selfridge, one good scout." A clipping has been received: "Selfridge: In this city, July 16, 1956, Samuel Woodworth Selfridge, beloved husband of Edith Godbe Selfridge; loving father of Samuel Woodworth, Jr., and Barbara Selfridge Tuttle; devoted brother of Mrs. F. G. Kellond, John S., the late Edward A., Jr., and James Russell Selfridge. A native of San Francisco, Calif. Funeral and interment private. Gray's, Divisadero Street, at Post." What a loss to his wonderful family and to all who knew Wood. At the last Reunion he wrote us so cheerfully acquainting us of his plans for retirement and promised to join us at the next Reunion in 1958.

Once again, Larry Hart is the bearer of sad news. One of our own Massachusetts boys, Ed Smith, formerly of Weston, Mass., after a very strenuous and praiseworthy life, has passed on to his maker. To Mrs. Smith and son, Billy, the whole Class offers its most sincere condolences, and we shall be very much pleased to greet Billy at the Institute in 1967. We shall have more particulars in the next issue.

Time brings changes. Janet Mattson has just returned from a two-week trip to San Francisco, and after a short stay with Daddy Bill, she will leave our clime and drive back to the Golden Gate, where she will enter the investment world starting her own "Gold Rush." Will we miss her?



Will Daddy miss? Yes, our reunions will never quite be the same. Good luck, my girl, but come back soon.

Well, Bill Mattson is finally taking that big jump. He will join the others of the unemployed of 1913. After a short rest in January, Bill will drive "thata way" toward the South, eventually arriving at Fort Lauderdale, Fla., the middle of February. Florida papers, please note: warn the *femmes* that here comes Bill. When the "birds" start North in the Spring, Bill will homer back to Boston or Newtonville. Then starts the big push for the 1913 45th Reunion. Start saving your pennies or the clipped coupons. Oyster Harbors Club is reserving its entire facilities for you and your gal.

Of course, you may expect almost anything from Allen Brewer; he now hibernates in two locales, and we quote: "The double address requires a bit of explanation. Presently, we alternate our living 50-50 in Florida at our new home on the Indian River Drive just north of Jensen Beach (community of Eden), and Fort Worth, Texas. Reason: we alternate with my sister-in-law in keeping house for my father-in-law since he lost his wife last March. The commuting chore of 1,300 miles every two months is not too bad, but. Just finished the chapter on lubrication in a new McGraw-Hill maintenance engineering handbook." Good work, Allen. We can see you're still spreading the "oil." Yes, I'll soon be holding the Fort alone, as Charlie Thompson has left for Beaumont, Calif., in the cherry country to visit his daughter, Carol, and her family for a couple of months.

New or changed addresses: Lieutenant John H. Adams, 1202 South Country Club Drive, Schenectady 9, N. Y.; Dr. Arthur W. Kenney, 1647—34th Street, N. W., Washington, D. C.; Joseph C. MacKinnon, M.I.T., Room 24-208, Cambridge 39, Mass.; Arthur E. Hirst, P. O. Box 27, Swansea, Mass.; Vernon G. Kay, 5 Rockledge Road, 1B, Hartsdale, N. Y.; Brigadier Lionel H. Lemaire, 40 Denham Street, Townsville, Queensland, Australia; George E. Leavitt, Jr., Buffalo Hollow Road, Glen Gardner, N. J.; Captain Morris M. Leonard, Baptist Corner Road, Ashfield, Mass.; Alfred H. Parthum, 259 E. Lucius Avenue, Youngstown, Ohio; Edward D. Pratt, 314 North Lake, Madison, Wis.; Sherman R. Ramsdell, 507 Crosswinds Trailer Court, St. Petersburg 4, Fla.; Frederick D. Rich, 1815 S. W. 3rd Avenue, Miami 36, Fla.; Charles W. Rieser, 1276 Eldridge Street, Clearwater, Fla.; Hyman L. Shoub, 329 S. W. 27th Avenue, Miami 35, Fla.; Ernest Weller, Fallston, Md. That is the finale. There is nothing left in the barrel. Remember, you lads and lassies, if you want notes send in news. With all of you carpet-baggers in Florida, Texas, and California, write us snow-bound unfortunates in the North; we can take it. — **GEORGE PHILIP CAPEN, Secretary-Treasurer**, 623 Chapman Street, Canton, Mass.

## 1914

Everyone who has had the privilege of being a guest of Charlie and Marie Fiske will always remember their gracious hospitality. On December 5, Charlie and

Marie entertained at cocktails at a "last look" party. The average age of the Class is now 65, and within the year a host of Fourteeners will retire. To celebrate this event, the Fiskes welcomed all at their apartment for cocktails, and later everyone adjourned for dinner to the M.I.T. Club of New York at the Hotel Chatham. Just to let everyone know that he had had to release his familiar Park Avenue apartment because the block was being demolished for a larger building, Charlie announced that his new Fifth Avenue apartment was none other than that just vacated by Eva Gabor. A theatrical engagement prevented Eva from being present also.

The joviality of the party may have been partly occasioned by the fact that so many were already on, or about to go on, the happy retirement list. Starting with Charlie, it should be reported that he will retire before summer to Bath, Maine, where he has a large farm near the Kennebec River. Winters, however, will be spent in warmer climates. Your secretary will retire one month after Charlie, and expects to move to the M.I.T. apartments in Cambridge, but warmer climates will probably lure him, like Charlie, during winter months.

Howard Borden will still maintain his home in Trenton, but the warm weather will, likewise, attract him southward in the winter. Thorn Dickson has already retired to New York City, but actually that is just a mailing address, as lots of travel is the basis of his activity. Lin Faunce has retired to the farm land of Connecticut. Dana Mayo has already retired to a beautiful spot at Newcastle, N. H., but his eyes, too, are already looking to the South for the winter months. Ralph Perry has just retired but as yet has not left Torrington, Conn., although travel is already indicated to break the monotony.

Among those attending Charlie's party in addition to those reported above, but who are not yet decided on their retirement, were Barratt, Gould, MacCart, MacLeod, Ober, Owen, Parsell, Perley, Rauber, Snow, Somerby, Russell, and Townend. While Affel has not yet retired, he, too, has a home in Maine, near Charlie's. He cannot retire until he gets the 50-Year capital gift for the Institute rolling well.

Several regular attendants could not make the party this year. Homer Calver had to keep an engagement in Chicago. His retirement comes up in a couple of years. Dinny Chatfield was just caught up in the usual year-end jam, but expects to get away for a vacation in Florida at Christmas time. Bert Hadley could not come from his retirement at Middlebury College, where he is chairman of the trustees. The pressure of his work at Middlebury kept him from leaving. Bob Townend did not expect to attend, but he made it at the last minute. He had been tied up by a contract for 5,000 tons of uranium hexafluoride for the Atomic Energy Commission, but the 1914 dinner got first priority. George Whitwell felt that he must attend a conflicting meeting held by the National Association of Manufacturers. George has retired from the vice-presidency of the Philadelphia Electric

Company, but has been kept very busy as a public utility consultant. Harry Wyldé has moved out of the New York area and retired to Southboro, Mass. He could not get away at this particular time.

When he had been active as vice-president of the Columbia Rope Company, Jim Reber had been a regular attendant at these meetings. This time Jim was very busy packing up to spend several months in the Philippines for his company. A special reason, however, was that he was being remarried before sailing. His previous wife died a few years ago. Before these notes appear, Jim will be remarried and the happy couple will be on the way to Manila.

Whenever your secretary travels, he telephones when possible to Fourteeners in the cities along his route. In Chicago he talked with Bob Patten, and learned that Bob had retired on September 1. For many years Bob had been with the General Electric Company (Hot Point Division), and previously had been with the Western Electric Company. Bob is listed in the telephone book and would be delighted to hear from anyone in Chicago.

When on the Pacific Coast, your secretary was also able to contact several classmates. Fred Barns is still busily engaged in the hot-house industry. At Oakland, Matt Harrison reported that he was just retiring and, as soon as he could sell his house, he was moving to Chico, Calif., where his son is located. One of the rapidly growing colleges of the state is located there. At Los Angeles, Jim Holmes was found working at his usual high pitch. It will be recalled that your secretary had previously reported on the large projects that Jim was carrying out for the Government in the mid-Pacific. Jim was in good health and, in spite of the years, looked at least ten years younger than the rest of us. Lucian Burnham is still enjoying his retirement at Pasadena. His appearance is unchanged. "No Worry, No Work Pressures" seems to be his formula.

Harold Wilkins retired December 31 from the General Radio Company, with whom he had been associated for many years. Harold has moved to a smaller house and expects to remain in Belmont, Mass., which has been his home for many years. He expects, however, to be able to spend more time at his summer home on Cape Cod. — **H. B. RICHMOND, Secretary**, 275 Massachusetts Avenue, Cambridge 39, Mass. **H. A. AFFEL, Assistant Secretary**, 120 Woodland Avenue, Summit, N.J.

## 1915

As these notes are being written just before the Christmas holidays, friendly wishes to all classmates everywhere, for a happy holiday season with good cheer, good fortune, and good health in 1957.

In January, at the Chemists Club, New York City, we shall have our annual New York Class Dinner. Under the able guidance of Hank Marion and Larry Landers, this has come to be a gay annual event to which we all look forward. A gang goes down from Boston, several go from Philadelphia and upper New York State to make it a fine chance to visit and renew old Class friendships.

Ken Johnson, Chief Engineer for Mc-



Kiernan-Terry Corporation, Dover, N. J., has recently designed an entirely new line of open-side, pneumatically loaded textile calenders, built to meet the exacting requirements of present-day textile finishes. Congratulations, Ken, and best wishes for some big orders for them. Jerry Coldwell, President and Board Chairman of Ford, Bacon and Davis, Inc., New York City, has recently been appointed a trustee of the Roosevelt Hospital there. It is felt that Jerry will make many valuable contributions in the development of future plans for the hospital. A fine public spirit to have, Jerry, but we wonder what you do with your spare time?

Reliable Parry Keller has joined Ben Neal's Committee of Sponsors for our 50th Gift Fund and writes: "I have been quite busy and manage to keep well. Apparently my travels in England and Europe last winter did not hurt me. I do have one item of news for the record. On September 28 last I acquired a new grandson, Kenneth Phillips Keller. This makes my score to date one granddaughter and two grandsons. I hope that I am not bragging too much. I know that quite a number of my classmates are ahead of me in this league. Already I am making my plans to be in New England next June. Last June I had to return to Akron before Alumni Day at M.I.T. This next time I feel confident that I will be with the gang at all the doings. I hope that you and Fran are well and enjoying life. I still have a most pleasant memory of the very enjoyable evening I spent with you both during my last visit to your part of the country. My best regards to Fran." It's always good to hear from Parry, and his is the only letter I have from Classmates for this month's column. How about it, the rest of you?

Recently, Al Sampson was elected president and I was elected vice-president of The Dry Salters Club of New England. Organized on March 11, 1885, this is one of the oldest business-social clubs in the nation. It was formed to promote acquaintance and good-fellowship among its members, who are limited to dealers and manufacturers of dyestuffs and chemicals. It's a distinction for 1915 to have two of its members as these top officers.

So here endeth the column, with a crying appeal for "Help" for next month. — AZEL W. MACK, *Secretary*, 100 Memorial Drive, Cambridge 42, Mass.

## 1916

Steve Brophy is one of those individuals whose activities are quite generally known. To check what he is doing, just watch the columns of the business sections of the New York Times and the New York Herald Tribune, particularly the columns on advertising. Quite often you read "Quoted by Thomas D'Arcy Brophy" or "Thomas D'Arcy Brophy, Chairman of Kenyon and Eckhart, says . . ." We read that the theme for the 1957 Advertising Week, February 10-16, will be the same as for the last two years, namely, "Advertising Benefits YOU!" Steve is chairman of the Advertising Federation of America's committee to promote that particular week.

Steve has been a member of the Presi-

dent's Committee on Improvement of the Physically Handicapped and, at the Annual Convention late in October, he addressed the annual convention of the National Society for Crippled Children and Adults on the topic, "What Am I Here For?" He noted that more than 28,000,000 people in this country alone suffer from chronic diseases and physical disability, that the number is increasing rapidly, and may soon reach one-fifth of the total population. In discussing the physically handicapped he said, "Until people recognize that the handicapped is first, a person, and only secondarily a handicapped person, the job of rehabilitation is not complete. Not only should every handicapped person who is able to work, and who is trained to work, be given an equal opportunity with the able-bodied, but he must be accepted in the community as an individual — a fellow human being — not as a blind man, an amputee, or a heart case." The following paragraph from Steve's story, in which he urges volunteer work in the cause of the handicapped, is worth quoting: "Would it surprise you, as it did me, to learn that an estimated 35,000,000 Americans are engaged in volunteer work in this country? Volunteer effort is today basic to our American way of life. It is a fundamental part of democracy — a distinctly American institution. It could not exist, let alone grow, under a socialistic or totalitarian form of government. Henry Stimson, the late great Secretary of State, was once asked by a visitor from abroad if he could tell him in what fundamental respect Americans differed from other people. 'It's not an easy question,' replied Mr. Stimson, 'but it seems to me that people in other countries invariably look for help in solving problems either to government or the church, while in America we organize a committee of volunteers — and do it ourselves!'"

Among the additions to the many reminders of the 40th Reunion, we have the following word from Howard Green: "The Cape Cod reunion was, to my way of thinking, a grand success. One of the bright spots was the sail around the island with Willard Brown and Walt Binger. It was a long drive and a little tough getting back through New York City late Sunday afternoon, although not nearly as bad as I had feared. From George Washington Bridge we were on freeways all the way home — New Jersey Turnpike, Pennsylvania Turnpike, and Ohio Turnpike which took us right close to home. I had to get back Monday night for meetings on Tuesday. I enjoyed Cape Cod thoroughly. Early in August we spent more time on the Cape at Dennisport, where my daughter and her family are each summer. We got as far north as Concord, N. H., in order to see my brother. In September we drove over to Detroit for the meetings of the American Statistical Association. The boys and girls gave me a nice surprise there by presenting to me a beautiful citation all framed and everything."

The citation he speaks of is one formally presented to him by the American Statistical Association at its 116th Annual Meeting for his highly significant contributions to the Association, and for the development and use of statistics in cen-

sus enumeration problems. The citation reads, in part: "Whereas for 25 years Howard Whipple Green, as chairman of the American Statistical Association's Committee on Census Enumeration Areas, has performed a significant service in developing the use of statistics in the solution of local problems, during this time he has been instrumental in developing the delineation and application of census tracts, not only in his home city of Cleveland, but in major cities throughout the United States and Canada; when he began his work, tracts were recognized by the Bureau of the Census in only 12 cities; today, approximately 14,000 tracts have been approved in 88 metropolitan areas and the number is continually increasing. . . . Through the leadership which he has given to the committee on Census Enumeration Areas, the Association has been able to play an important role in promoting the development and use of statistics for small areas in major cities. . . . Therefore, the American Statistical Association . . . formally pays tribute to Howard Whipple Green. During a quarter of a century . . . he has rendered outstanding service to the Association and to the advancement of statistics through his contributions to a widespread and growing appreciation of the value of statistical data and methods in the solution of many problems." Certainly a fine and well deserved tribute, Howard, and to which your Secretary as a fellow of the same society can heartily subscribe.

We had a brief word from Howard Hands giving an expression of appreciation to the committee for the "admirable job" they had done on the reunion. He then gets into a topic that is perhaps on many minds: "As mentioned there, many of us will be retired by the time we have another such get-together. I've just taken my first step with that in mind — bought myself a summer home on a lake in New Hampshire. My plans are to use that during the summer, and then pick up a place in Florida for the winter. Hope the finances are sufficient to carry out the ideas."

A news release in October gave a most interesting story about George Maverick, who retired on October 1 from the Esso Research and Engineering Company after 33 years service. We all know something of George's brilliant career. He was awarded a doctorate degree in physical chemistry by the University of Geneva, Switzerland. He was an assistant to Warren K. Lewis, an Esso research consultant, at M.I.T. before serving in France during World War I as an Ordnance officer. He joined Esso in 1923, and during his first 15 years with the company his positions included those of director of the Research Laboratories and assistant manager of Research and Development. Since 1938 he was in personnel and employee relations work with Esso, and was employee relations manager when he retired.

And now comes something equally interesting. He is taking up a full-time career as a professor of business administration at the University of Virginia, Charlottesville, Va. He has joined the University of Virginia's new Graduate School of Business Administration and is

teaching a course in employee relations in the first semester. We sent congratulations to George and asked him for a little more information, and here is an excerpt of his letter which bubbles over with enthusiasm: "My wife and I are both from San Antonio, and had counted on retiring to my old home there, Sunshine Ranch. But, Texas is a long way from our children and grandchildren, so we have been looking over places in the East for a number of years. The idea of retiring to a small university town occurred several years ago. We had already chosen Charlottesville as the most interesting of them when the new Graduate School of Business Administration here offered me a professorship. I have been hard at it for about two months now and find it extremely interesting. Charlottesville is a wonderful place to retire, and I recommend it to all my classmates. Even if they are not interested in that, I hope any of them that are traveling South will stop by and visit us at Shepards Hill Farm. We are listed in the Charlottesville telephone book."

From other sources, we understand that George and his wife are living on a 250-acre site in the rugged mountains outside Charlottesville. Part of the land was acquired by his grandfather over a century ago, and he expects to clear five or six hundred feet throughout the woods so he can make a two-mile circle tour in a jeep. To reach the home he built it was necessary to use a bulldozer to clear a half mile path through the woods. In addition to teaching George expects to work on his farm. He and his wife may visit Mexico and Guatemala where they have been eight or ten times in the past 15 years. Congratulations, George, and I think many of us envy you no end.

As life has gone on and on, we have noticed that some people have that something that is wrapped up in the word "dependable." From the viewpoint of your secretaries over the past few years, Emory Kemp is one of those individuals — ask him for a story and he always comes across. Here's his reply to a recent request: "So glad to hear a word from our secretary, and I shall immediately sit down and write a few words and hope they may be of some interest to our classmates. First, let me state my appreciation for the wonderful turnout of classmates at our 40th, which is due to the tireless work of our Class officers, plus Bob O'Brien. I really believe I enjoyed this last reunion as well if not better than any previous one. Maybe that is a sign of age! Anyway, my son Malcolm [1916 Class Baby] wishes to be remembered to all of the Class, and has several times commented on what a wonderful group of men he met at the reunion. As usual, we seem to always get an excellent picture, considering such a large group is involved, but received the following note from Jimmie Evans: 'Dear Emory: You are No. 21 in the Class Picture — what the hell happened to you — you look as though you think "People are no damned good." It is a swell group. Best regards. Sincerely, Uncle Jim.' I think our Class is very fortunate to have someone like Jimmie with his constant jovial nature and his ability to keep things moving. [Hear, hear!]

"Since the reunion, my family has increased now to 11 grandchildren by the addition of a granddaughter, named Vickie, to my youngest daughter, Ruth Anne. I am still acting as technical advisor to the Post Engineer at Camp Wellfleet, and hope to be able to retire for good about next May as I reach the age next August when Uncle Sam starts my Social Security benefits. All I hope is that I can keep busy in order not to deteriorate too fast, and be able to do some travelling and call on some of our classmates, should I be passing through their towns. This March, my wife, her sister, and I are planning to take a trip to Florida and the Keys, then up the West Coast to Mobile, Ala., through Kentucky, Tennessee, and back to good old Cape Cod, taking about 16 days and covering about 4,450 miles. Hope the above will help the 1916 Class Column." Sure does, Emory, and thanks again.

Ralph Fletcher reports a very interesting letter from Howard Claussen, who offered congratulations on the way "the reunion and all of its details" were handled. Said he felt quite at home, for his summer home is just diagonally opposite from the Oyster Harbors Club, and he has been a member of it for many years. He goes on: "Our summer home is what you might call 'semi-winterized' which permits us to go there starting week ends early in the spring until almost winter. In addition to the usual array of skiffs, outboards, and so forth, we have a small cabin cruiser in which we make innumerable cruises to Nantucket, Martha's Vineyard, the Elizabeth Islands, and even all the way down the coast to Block Island, Newport, New London, etc. My wife is the former Florence Gifford, daughter of the late Congressman Charles L. Gifford, who served the Cape and New Bedford districts of Massachusetts for 28 consecutive years in the House of Representatives. Politics comes naturally to my family, and my wife was the president of the Women's Republican Club of Massachusetts for four terms — something of a record. My youngest son, Frederic, has also gotten the bug and is working diligently at it over at Harvard. My oldest son, Gifford, is just now in the process of trying to resume civilian status after four years in the Air Force. Our marriage produced no daughters, and I have often been told that if we could have had a girl in the house, I would have been a much better man than I am."

Howard is vice-president and director of Bemis, Brothers Bag Company; his function, the direction of cotton operations. He notes: "We are not large as cotton mill operators go, having reduced our mills from four to two, eliminating the two uneconomic ones in Indiana and maintaining our two large units, including the villages, at Bemis, Tenn., and Bemiston, Ala. So my position does not merely involve the supervision of raw cotton purchases and production, but at the same time it involves me in many interesting situations in connection with municipal administration. By this I mean such problems as adequate water supply, adequate power transmission lines to carry the ever-increasing burden of power use of appliances in the village residences,

gas transmission lines, surface drainage systems, sanitary sewage mains and disposal system, maintenance of roads. Still, in a certain sense, I am rather pleased to feel that I am following some aspects at least of the course which I chose — mechanical engineering. Our two large cotton mills do not by any means supply all of the requirements of our many textile bag plants. For this reason, I have in New York a staff of both buyers and sellers. I am proud to have been associated with Bemis ever since 1916, for we are No. 1 in textiles and No. 2 in paper bags."

Markets and consumer attitudes are things that are being subjected to measurement and evaluation by statistical sampling techniques in more and more industries these days. Len Stone has been associated with these problems in the telephone field, and his recent letter will be of special interest to many. He writes: "So you want News — well here's what rose to the surface, though, like the sex of the hippo at the zoo, I can't see how it will be of any interest except perhaps to another hippopotamus. I'm busy launching another attitude survey of the first three levels of management people (foreman up) in the operating companies of the Bell System. Between 90- and 100-thousand people may be involved this time. A great deal of effort has been invested in the training of management people during the last two years, including introduction into management training, and it is hoped that the coming survey in early 1957 will show improvement over the previous survey of 1955. Results will be reported for 200 or more organizations, taking somewhat over 100 pages each. Each company does its own analysis and then results are summarized in my office. An interesting feature of this survey is that its magnitude justified programming an electronic computer — Univac — to process the data. It permits reporting in much greater and more meaningful detail than was previously possible, producing results in much less time, with much greater accuracy and at less cost. Surveys of the attitudes of employees below the management level are also being conducted, and they are also processed electronically. It is hoped to measure the effectiveness of various personnel programs by means of these 'non-management' surveys. I won't feel badly if you don't use this effort, but at least you showed me my dooty and I done what I could about it."

Your secretary is glad to report active and vital participation on the part of your directors in furnishing news bi-monthly, on request, to this office. Hovey Freeman's response gave something of more than ordinary interest about a sparkling family exploit to come off in 1957. He writes: "My youngest son, with a couple of partners, is having a 53-foot yawl built in Hong Kong, where prices are only about a third of what they are in this country, and is sailing it home with his wife and crew of three men, they hope by way of the Suez Canal, starting in January and taking about a year. The world situation naturally is worrying him a lot and also his parents. We had hoped to fly out and see them somewhere along the way but that now seems rather im-



probable, so I guess we will sit by the fireside and relive the memories of our wonderful trip to the Mediterranean two years ago and of our fascinating trip around South America last winter. I somehow never tire of seeing my movies of the beautiful girls in Bikinis on the beach at Nice. [Now, now, Hovey, tsk! tsk! tsk!] Our sixteenth grandchild arrived about three weeks ago, and my wife and I celebrated our 39th wedding anniversary, so we long ago joined the class of 'antiques.' There it is! We asked in last month's notes who could beat 11 (grandchildren, that is). We reported that Earl Mellen and Emory Kemp both have 11. And now here's Hovey Freeman reporting sixteen (16). So now we say: Who can beat 16?

And on that note we will stop for this time, with the observation that this column is what you make it — send your bits of information to the address below. — HAROLD F. DODGE, *Secretary*, Bell Telephone Laboratories, Inc., 463 West Street, New York 14, N. Y.

## 1917

Rudy Beaver contributes this interesting account of a trip to Europe: "A year ago, Helen, daughter Cynthia, and yours truly enjoyed an extended driving trip through Europe. Rather than buy a small foreign car, we took Cynthia's two-door Plymouth because of its comfort, seating capacity, and storage space. We sailed on February 17 from New York on the S.S. *Constitution* bound for Gibraltar. The weather was balmy, and for the next five months we traveled in continuous spring, ending in June in Scotland.

"Our first night was spent in Gibraltar. The following morning, after viewing the Rock at close hand, we entered Spain and traveled leisurely through Cádiz, Seville, and Manzanares, staying whenever possible in government-run alberges, which are small inns, all of the same architecture, located on the outskirts of small villages throughout Spain. We stayed in Madrid for a week, and had to get accustomed to their siestas from 2-4 P.M., and their dinners at 10 P.M. You find yourself dining alone if you wish to eat before this fashionable hour. From Madrid we drove west through Spain into Portugal which was as green and fertile as Spain was brown and barren. In Lisbon the ladies went to the local flea market, filled with junk, no doubt imported from the ash cans of America. Returning to Seville, we drove south to Antequeras, Málaga, and Granada, where a guide took us through the many-fountained and gardened Alhambra. From there we headed towards Barcelona via Puerta Lumbreras, Alicante, Valencia, and Castellón, admiring in each city the magnificent paper maché displays and fireworks to celebrate the Fête of San José. Four days in Barcelona, which included part of an afternoon at the bullfights — couldn't take it! In this city, we took time to have suits, sportcoat, and trousers made.

"Leaving our car in Barcelona, we flew to the Island of Mallorca for a week's stay at the fabled Hotel Formentor on the far tip of the Island overlooking the sparkling Mediterranean. An island para-

dise where food, service, and accommodations are deluxe. Back to Barcelona via boat for one last fill of that wonderful dish, Paella Valenciana, made with various kinds of fish and rice, and on to the French and Italian Rivas, having spent 37 days in Spain and Portugal. Without much dallying we drove through Southern France — Carcassonne, Narbonne, Nîmes, Aix-en-Provence, Cannes to Nice. Here we made our headquarters in a villa and took daily excursions via the handsome Grand Corniches to Grasse with its perfumeries, Monaco, and of course, Monte Carlo.

"The Italian Riviera is rugged country. Roads are narrow and crooked, filled with behemoths of trucks each with two or even three huge trailers. Stopped at Arzenzano, Sestri Levante, Civitavecchia. (Cynthia rescued her luggage from an English bus tour just as it was about to depart for a spot 200 miles in the opposite direction.) To the standard sights add attendance at the opera with the marvelous revolving stage which made "La Traviata" a spectacular production. It was thrilling to see the Colosseum, Roman Senate and Forum, and to throw a penny into the Fountain of Trevi. We arrived in Rome on Easter Sunday, so of course joined the throng in front of St. Peter's. From Rome south to Naples, Pompeii, and picturesque Sorrento. Unfortunately, a windy, cloudy day made the water too choppy to allow a trip to Capri. The drive through Amalfi to Salerno is hair-raising, where after each wicked stretch the sign says, "Resume Breathing!" Another wicked drive I recall is in Spain, the shore road from Sitges to Barcelona. If you are on the outside lane of these roads, you have the Mediterranean one mile straight down, with but flimsy guard rails. The highest road in Wales, over Ty-nant, near Llary Mawddwy, is a thriller too. For goose flesh, we went over the Simplon Pass in May, ten days after it was opened for the season. It was still icy, especially in the long snow tunnels, and there were no guard rails for protection against a drop of thousands of feet down into the valley below. We returned to Rome and drove north to Florence. To the latter's beauty, romance, and history, add that, in our opinion, it is the best city for shopping on the Continent. Leather, straw, lace, and silk may be purchased very reasonably, and the quantity and selection is a delight to the female shopper! Venice lived up to its reputation with its gondolas, St. Mark's Square, and the pigeons. Venice also boasts the world's largest garage. The marble bathrooms which one finds everywhere in Italy also deserve mention. Our prize from Venice is a hand-blown pink and gold chandelier.

"From Trieste, we entered Yugoslavia via Rijeka to the fine-looking city of Zagreb. Good food at the Palace Hotel, but the beds! The mattress hit bottom! A first-class, straight and level road, about 300 miles long, leads to Belgrade. Fortunately, this is a fast road because there is no place to put up between Zagreb and Belgrade. The latter city was a disappointment. All the hotels were full — they usually are — and reservations are not honored. The city and the people looked drab. Since we could not stay in Belgrade

the Yugoslav travel agency, Putnik, found us a room in Novi Sad, 50 miles away. This is an industrial city of 80,000 on the Danube. Again, the food at the hotel was good, but the bedsheets reached only two-thirds down the bed. We had to strip the sheets from a cot in the room to piece it out. The toilet paper was newspaper, which we could not read. Upon our complaint they obliged us with used, greasy paper napkins. We had luckily been foresighted enough to bring our own from home for such emergencies. While in Novi Sad, I went to the local hospital to call upon a surgeon who is as well known in his profession as our Harvey Cushing or Frank Lahey were. However, the hospital itself was terribly crowded, the patients looked dirty and unattended, and the sheets, when there were any, were filthy. We observed that the patients, however sick or in pain, arrived at the hospital in a slow, horse-driven cart, and the relatives were left to their own devices to get the patient into the hospital to see a doctor. We decided we would rather die at home! From Novi Sad we drove 50 miles further inland to Zrenjanin over the roughest and dustiest of roads — more like our out-of-the-way country roads. We never passed any cars, only horses and carts, the major means of transportation. In Zrenjanin we ventured out to take pictures of the local scenery, and were arrested by an infantry captain on a bicycle. We were immediately taken inside a house to the courtyard and put under civilian guard. Eventually a security officer, a major, an interpreter, a photographer, and city detectives appeared. It turned out that one of our pictures of a peasant woman pumping water included a military office building. After interminable wrangling, the photographer was instructed to destroy the film. We were so fed up with this incident that we halved the planned length of our stay, and literally fled into Austria. We did have to spend one night in a road station in leaving the country and, as in all these places, there was no hot water and we had to buy firewood for warmth. Next day we hurried through Zagreb and Maribor and got to Graz, Austria, and what a treat this was! A clean, green, mountainous, tree-covered country, with fine-looking, cheerful, clean people. A cordial welcome was given us at the Hotel Steierhof, huge rooms, comfort, and wonderful meals. An 'oasis' to us after our horrors of Yugoslavia.

"We thoroughly enjoyed a leisurely trip through Austria, stopping at Velden, Badgastein snug in a valley of towering mountains, St. Anton, Klagenfurt, and Innsbruck. With Zurich as headquarters, we took a week's circuit around Switzerland through Brienz, Montreux, Zermatt (here we saw the majestic Matterhorn), St. Moritz, and Pontresina via Domodossola, Italy. We entered Germany via Bregenz, Austria, and visited Munich, Nuremberg, and Stuttgart, all still bearing the destruction of war. We allowed but little time for Germany and France — 11 days. We ferried across the Channel from Boulogne to Dover towards the end of May. In England we explored thoroughly the southwestern section. We had ten-day look at Devon and Cornwall,



east to Land's End, Penzance, and St. Ives, and were intrigued by the many thatched roofs. We much enjoyed a week in London, what with good shows, good living, good shops, and good weather. From London we shot up to Scotland via the North Road with an overnight stay in Boston. A good look was had at that marvelous structure, the tubular cantilever bridge over the Firth of Forth. A delightful place to rest up is Dunkeld House in Dunkeld, Scotland, the former home of the Duchess of Atholl on the River Tay. Another memorable place is Braemar, where we stayed at the Invercauld Arms. Nearby we watched salmon struggle up the River Dee, and peeked in the windows of Balmoral Castle. This was the farthest north we reached, and it was still light enough at 11 P.M. to take a picture! We came down through the Lochs, the Scottish Lake country and spent two days in Glasgow and the Clyde region. From there to the English Lake country with headquarters on Lake Windermere.

"Sadly, we arrived in Liverpool to sail home only to learn definitely that because of a strike our ship, one of the *Empresses*, would not sail. However, the Canadian Pacific agreed to transport our car to Montreal, while we would go by train to Plymouth to take passage to Montreal on a Dutch freighter. This gave us an unexpected week which we utilized by visiting North Wales. We feel so fortunate to have been able to take this extra trip because North Wales is a lovely, emerald-green country with isolated roads over the steepest mountains. We found the Welsh people fascinating, but with a wicked language. Just listen: Caernarvon Castle, Llanrwy, Llanberis, Dolwyd, Harlech Castle, Mallwyd, Llary-mawddyn. We stayed in the fine Hotel Llanwddyn in the town of the same name on Lake Vyrnwy. This lake supplies water to Liverpool 100 miles away. Plymouth was a surprise. It was completely bombed during the war, and is now being rebuilt from the ground up, but according to plan. New streets and new buildings, must first be approved by a Council before they can be built so that everything is orderly. The Grand Hotel is beautifully located on the Hoe facing the channel. Famed Eddystone Light is visible at night from the Hotel. We embarked at midnight on the M.S. *Prins Willem Van Oranje*, a new motor ship weighing 7,500 tons. It carries 38 one-class passengers, and gave us a pleasant, smooth passage via the Strait of Belle Isle and Anticosti Island. This line has excellent cuisine and service. Thus far we had pursued spring, but we landed on the 8th of July in Montreal in a 99° heat! There was much senseless, needless, and costly trouble with both Canadian and U.S. customs in getting our purchases home. I would advise if you purchase a great deal to come back via New York where they are experienced and know how to handle such as we. We were gone 148 days, visited 10 countries, and traveled 12,350 miles. We came home laden with souvenirs and memories of Europe which will never be forgotten."

Lin Noyes on his way to a press conference in Cuba when his heart tuned

up on him, putting him in a Florida hospital. But he is back home, taking it easy, and planning to be back for the 40th.

Judging from the reunion registration checks that have come to Loosh Hill's order, we are going to have a fine turnout for our 40th. Nineteen checks were received with enthusiastic comment, and as many more indicated that they were planning to come. This is good for the first notice.

Stan Dunning arranged for another small but delightful Boston area meeting at the Faculty Club early in December. Lobby had to go to a dance but most of the other standbys were on hand. New to the group was Stan Cooper, who added a bit of lustre to the chatter and who will be present at future meetings. Suggestions were made for Reunion plans and, in Lobby's absence, surprising unanimity was reached on the desirability of the female touch for what may be the first time in Class history. — **RAYMOND STEVENS, Secretary**, 30 Memorial Drive, Cambridge, Mass. **W. I. McNEILL, Assistant Secretary**, 570 Lexington Avenue, New York, N.Y.

## 1918

Quivering with expectancy over the gastronomic delights of a turkey dinner and with traces of the old zeal breaking through here and there, the following of the brethren gathered at the M.I.T. Faculty Club on Saturday evening, December 8: Eli and Mrs. Berman, Lester and Mrs. Conner, Saxton Fletcher, Clarence and Mrs. Fuller, Alan and Mrs. Howard, John and Mrs. Kilduff, Alexander and Mrs. Magoun, Hall Nichols, David Rubin, Max and Mrs. Seltzer, Charles and Mrs. Watt, Harold and Mrs. Weber, Royal Barry and Mrs. Wills and, of course, our own Gretchen Palmer who, it seems, though still simmering with administrative genius, is now aloof from tensions and breathing the air of sublimity in a quiet parish house. She talks of retiring to some tranquil isle in Hawaii, but just once we would like to see her carrying on like a vicar's daughter in a night club. Anyhow, in 40 years she has made a successful journey from the implicit of chemistry, through the imponderable of educational administration, to the unknown of theological ministrations.

Sax Fletcher, possessed of that flavor of youthful sweetness which still smiles after 40 years' association with baking ovens, was in Seattle in November, where he ran into Donald Bradley. Don, you will recall, was a distance runner on the track team, exhibiting thus early a neat talent for going places . . . across the continent for example, where he is now a proud grandfather. Dave Rubin, in his ever quiet way, told about a son who works in the M.I.T. Supersonic Lab winters, and runs what was Dave's Camp Rappatak in Fryeburg, Maine, during the summers. Dave himself has retired and is off to the comfortable refuge of Florida until March 1.

Mrs. Weber reports that Harold has been climbing his personal Mt. Olympus with resilient persistence till he is now chairman of the National Advisory Council which is itself advisory to the Chemi-

cal Warfare Service. He is a member of the Army Scientific Advisory Panel, and chairman of its sub-committee on Chemical and Biological Warfare. In his lapel is a gold guided missile, symbolizing to those in on the secret that he holds a position advisory to the army. If you are successfully through all those advisory adjectives, we have a few adjectives which can be added to our own soothing advice that he take a day off now and then to meditate quietly in his farmhouse at Mason, N. H., which is not too far from our own hideaway.

Al Howard is still with Bemis Bag where he has been practically since World War I. He now has 12 grandchildren plus one on the way. This increase in the population has practically forced him to build a second house at Lake Sunapee (New Hampshire, of course). What delights him about it is that Bill Wills, who wrote a book titled "Building on the Level," is designing it to cling imperturbably to the side of a crag. Clarence Fuller is vice-president in charge of sales for the Foxboro Instrument Company with which he has remained these 37 years. There is a tale of some delicacy connected with his three-year effort to buy from Bruce Barton of Batten, Barton, Durstine and Osborn, Inc., the lake shore property he built on in Foxboro. Anyway, he got it, which reminds me of a former student of mine who in the sour year of 1932 got a job from Barton by patiently waiting in his outer office every day for 32 consecutive days.

Conner works for the Bryant Chemical Company in North Quincy, but spends most of his time at the laboratory in Hingham where he is in charge of research and development in the area of textile chemicals. Eli Berman says that color television is not selling but is really technically good. The sets, he believes, are better than the current broadcasts. By the time his three and a half grandchildren have become four, perhaps you will order a set from Eli. Sax Fletcher spoke of the 50-year fund for which Alan Sanger and Bill Wills are agents. They now have about \$20,000 pledged, but want \$50,000 by 1968. Hall Nichols, director of building construction for the State of Massachusetts, made a short speech concerning his responsibilities. This, together with a movie on electronically controlled machinery, constituted the formal part of an informal evening.

In what might be called the "Odd Items From Everywhere" department are the following: Lieutenant Colonel John H. Earl was disabled in Korea in 1951 and now lives in San Antonio, Texas, near the Brooks Army Hospital. Yale Evelev has settled in Philadelphia, which is just about the right distance from Reading, Pa., to keep a distant eye on the business while the boys run it in comparative freedom. Henry Lacey retired as a four-striper in the Navy's Civil Engineer Corps, and now does his "plain table" work on eight acres of sunshine and citrus grove at Melbourne, Fla. Sam Chamberlain has been poking a camera around various places in the Berkshires. I sense a new engagement calendar in the making. Stuart Boyd retired from the U. S. Rubber Company after 37 years

and contemplates his sun tan on Pompano Beach, Fla. Lawrence Flett of New London, N. H., is in Europe until after the first of the year. (How fascinating that on retirement most of us get hot in the south or stay cold in the north.) One of Ralph Whitcomb's grandsons, says he, has had a birthday. Colonel Edward B. McCarthy is convalescing at his home in Wellesley after several weeks in the hospital. And that must conclude my undeviating mission for this month. — F. ALEXANDER MAGOUN, *Secretary*, Jaffrey Center, N. H.

## 1919

Ben Bristol wrote us this month that he is still at the Foxboro Company, Foxboro, Mass. He's keeping very busy but still finds time for a little fishing and golf on the side. Wilfred O. Langille was in the news recently on the occasion of the cornerstone laying of the new wing of Somerset Hospital. Will is president of the hospital Board of Trustees and told the audience that as a result of the more than \$1,000,000 contributed by the community, the hospital wing was practically paid for. It is a pretty sure bet that this was achieved by a lot of hard work on Will's part.

We were sorry to hear of the passing of Victor T. Givotovsky. Mr. Givotovsky was born in Ekaterinoslav, the Ukraine, Russia, and came to this country in 1918 to attend M.I.T. At the time of his death he was deputy director of the Buildings and Grounds Department in Washington, D. C. We extend our deepest sympathies to his family.

J. J. Harrison wrote from his home at 374 Lincoln Avenue, Cranford, N. J.: "We spent the summer in the Adirondacks but otherwise are enjoying the leisure of retirement." Bernie Coleman writes that he and Mrs. Coleman made an extended trip East this past summer with stops in Chicago, Boston, New York and Miami Beach. "I hardly recognized the Institute with its breath-taking developments. We certainly were pint-sized in our days. The mature growth is significant indeed of the far-flung accomplishments of those who guide the Institute's destiny. It was really a thrill to see it all. Our grandchildren are thriving in spite of the L. A. smog. Billy is three, Glen, one, and Wendy, six months . . . and away we go!"

Doc Flynn is now manager of the Planning Department of New Jersey Zinc Company. His daughter got her master's degree at Harvard after graduating from Colby and is teaching in Fairfield, Conn. — EUGENE R. SMOLEY, *Secretary*, The Lummus Company, 385 Madison Avenue, New York 17, N. Y.

## 1920

It is with sorrow that I must report the death of Grant French. Grant was employed by the Pennsylvania Railroad for almost the whole of his business career. He was engineer in charge of many of their construction projects. He was a member of the American Railway Engineering Association and was serving on their committee on Uniform General

Contract Forms at the time of his death. Grant had been living in Chicago and is survived by his wife.

"Skeets" Brown, who was so long in El Paso, Texas, and in Mexico, is now with American Smelting and Refining Company's headquarters in New York, and is living in Scarsdale, address 50 Popham Road. Ted Kendrick is in Succasunna, N. J. Professor Francis Sears has left Hanover, N. H., and is now in Norwich, Vt. Louis Bender is in Topeka, Kansas, address 2032 Oakley Avenue.

Ted Bossert has been appointed chief metallurgist of the Aluminum Company of America. Ted has been with Alcoa almost ever since graduation, joining the Technical Direction Bureau at New Kensington in 1923. Later he was in the Alcoa Research Laboratories as assistant in charge of the metallurgical department. He was named assistant chief metallurgist of the fabricating division in Pittsburgh in 1935 and became the chief metallurgist of the division in 1944. Ted is married and has three children.

Laury Hitchcock, as many of you may have seen in the papers, has resigned as president and managing director of the Air Pollution Foundation to return to private practice as a management consultant in industrial research and development. Laury went to Los Angeles to take on the big assignment of forming a competent, scientific fact-finding organization, to set up a badly needed research program looking into the causes and probable remedies for the smog problem, to embark vigorously on such a program, and to provide necessary public information and educational services. In a statement to Dr. DuBridge, Chairman of the Foundation's Board of Trustees, he states that he feels that these goals have now been accomplished and that the staff and programs of the Foundation are now competent and adequate to attain its purposes. Before going to Los Angeles, Laury had served in executive and administrative capacities in industrial research and development with the Hooker Electrochemical Company, the Quaker Oats Company, and the National Dairy Products Corporation. He is the author of 31 technical publications including important works on hydrocarbon chemistry.

Bill Dewey, who is a partner in the Anderson-Nichols Company, Boston consulting engineers, gave a talk before the North Shore Chapter of the Massachusetts Society of Professional Engineers on the development of the Texas Tower, a project for which he had the engineering responsibility. He told about the building of the first tower, its placement at sea and the effect of hurricanes and storms.

Arthur Dopmeyer was recently transferred by the U. S. Public Health Service to Portland, Ore., where he will serve as area sanitary engineer for the States of Washington, Oregon, and Idaho. He has been a commissioned officer of the Public Health Service since graduation, and his most recent previous assignment was as chief sanitary engineer to the Hashemite Kingdom of Jordan.

Ed Burdell, President of the Cooper Union for the Advancement of Science and Art, had some interesting comments to make on education of the "uncommon"

man in his annual report to the Cooper Union Trustees. He said: "Unusually talented students must be discovered, must be specifically motivated toward the study areas in which their talents lie, and must receive training for leadership as well as for professional skill." He went on to say that "in tomorrow's technological world the best utilization of the best available brain power will be essential and, to achieve this, America has something to learn. Our American democracy has fought shy of elite groups, whether by birth, wealth or brains. The recent fad of applying the term 'egg head' to anyone who displays unusual intellectual ability seems to imply distrust of the intellectual as a sort of misfit in a mass of conformity." However, Dr. Burdell feels that "the development of the potential brain power of intellectually superior men and women is our greatest need." — HAROLD BUGBEE, *Secretary*, 7 Dartmouth Street, Winchester, Mass.

## 1921

We acknowledge, with editorial salaams, the sagacity of Phos, *VooDoo's* office cat. This whimsical feline opened the November issue with: "Phosphorus wishes to extend a cordial welcome to Professor John Rule who, during the summer, was appointed to the position of Dean of Students. We of *VooDoo* interpret the appointment as a new pledge of the administration's love for the magazine, for Dean Rule is a former *VooDoo* editor." This brings back fond memories of the old Stone and Webster hut on Massachusetts Avenue, populated by student activities, while Walker was a barracks for World War I aviators. Memories of *The Tech* being put together on frigid mornings with typewriters carefully lowered into the furnace pit. Memories of Frank Whitworth and Homer Howes' 20 of *The Technology Monthly* . . . Warren Waterman, Morris Bauer '22 and the late Edward Edwards of *The Tech* . . . Pi Delta Epsilon's pledge publication, *The Filter Paper* . . . and the resultant *VooDoo*, featuring our favorite (but no longer used) sketch of scraggly-necked Phos, head totally obscured, lapping from a shallow saucer.

As we go to press, another publication has arrived with the interesting letter from Alumni Association Prexy Ted Miller '22. Entitled "M.I.T. Alumni Make News," this semi-occasional review is replete with familiar accounts of members of the Class of 1921. Irv Jakobson is again honored on his election to the presidency of the American Boating and Yachting Council. Bob Dolle, our beloved goldfish farmer, earned a well-deserved plug for his Lakeview Aquatic Farm in Cincinnati. The Reverend Williston Wirt and the Reverend Everett R. Harman command attention for their "human engineering," but the editor overlooked the other half of our proud sky-pilot contingent, which includes the Reverend William F. Hastings and the Reverend Samuel H. Miller. Squire Ed Farrand receives well-justified acclaim in the longest single article, which recounts his many strenuous current activities after having formally given up his old business associations. Quips the



editor: "Retirement?" Further research might uncover Ed's given name to be Edmund! There is also some redundancy about beaver, early engineering professionals but not known to have worked in bronze or silver. A Gold Beaver is to be found in the telephone directory. The highest honor is paid to Dr. Manuel Sandoval Vallarta. A front page likeness of this world famous nuclear and cosmic ray physicist and cyberneticist is captioned with the announcement of his appointment as Under Secretary of Education of Mexico. Through altered class numerals, our indicated loss is 1923's temporary gain. Please give Val back!

Further to last month's announcement, Helier Rodríguez is chairman of the "M.I.T. Weekend in Havana" committee of the M.I.T. Club of Cuba, which has arranged a splendid program for all Institute Alumni and their wives, for February 22 through 25. Gala parties and tours, sun-bathing and swimming at Varadero are packed into three unforgettable days. For last minute arrangements, contact A. H. Rodríguez, Concordia 61, Havana, Cuba. Ray St. Laurent and Chick Kurth have been actively preparing a letter which is probably in your hands by now. Please return your answer to Chick promptly, indicating your preference for 1921 meetings at the various dates and places listed. This follows the ideas generally expressed at our 35th reunion that we should have more frequent opportunities to meet with each other than are afforded by our annual parties at Alumni Day in Cambridge and the big five-year reunions. Which reminds us that Course VI-A promised to set up a meeting this spring, and Charlie Williams and your Secretary (both ringers from Course VI) were elected "honorary" members (they pronounced it "ornery") of VI-A. Charlie was asked to aid in making arrangements for the meeting.

Speaking of Hexalphas, Maxine and your Secretary have a most welcome personal note from Madeline and Rufe Shaw. Daughter Mary is staying with her folks in Beverly, N. J., while her husband is in Japan. Sumner Hayward phoned to say that he and Betty had journeyed to Wilmington, Del., for the December 1 wedding of Margaret Hill, Wellesley '55, daughter of Mr. and Mrs. Sanford J. Hill, and James R. Hodges, M.I.T. '51. John Barriger reports his new home address is 213 Tennyson Avenue, Pittsburgh 13, Pa. We missed seeing Herbert C. DeStaebler during his recent sojourn in New York City and now learn that he has moved to Lititz, Pa., where he can be reached at 400 West Lincoln Avenue. David P. Wheatland says he has moved from Topsfield to Cambridge 38, Mass., where he lives at 6 Divinity Avenue.

Thumbing through the new Directory of the Alumni Association for 1956-1957, we note the following cast of 1921 participants in numerous activities, in the order of their appearance. Bill Sherry and Gus Kinzel are Alumni Term Members of the M.I.T. Corporation. Chick Kurth is our Class Representative on the Alumni Council. Council representatives for M.I.T. clubs include Mich Bawden, representing Cleveland; George Chutter, Newark; Josh Crosby, Bangor; Mel Jen-

ney, New Orleans; Frank Kittredge, Monterey; Ace Rood, Indianapolis. The Class officers are Ray St. Laurent, President; Cac Clarke, Secretary-Treasurer; Ted Steffian, Assistant Secretary; Ed Farrand, Class Agent; Bob Miller, Photo Historian; Warrie Norton, Chairman of 50-Year Gift; Mich Bawden, Special Gifts Chairman. Alumni representatives on departmental visiting committees include Irv Jakobson and Norborne Rawlings for Naval Architecture and Marine Engineering; Helier Rodríguez for Modern Languages; Jack Barriger for the Libraries. Officers of various Alumni clubs are: Larry Buckner, M.I.T. Club of Central Pennsylvania; Helier Rodríguez, M.I.T. Club of Cuba; Jack Whipple, M.I.T. Club of the Philippines; Joe Wenick, M.I.T. Club of Northern New Jersey. On the M.I.T. Educational Council are: Sam Lunden, California; Ray St. Laurent, Connecticut; Ed Mandell, Florida; Ed Farrand, Georgia; Harry Field, Hawaii; Cac Clarke, Munnies Hawes, Sumner Hayward, Ed Lockwood, Joe Wenick - New Jersey; Paul Anderson, Irv Jakobson, George Owens, Art Skilling, George Welch - New York; Ray Snow - North Carolina; Wally Adams - Ohio; Si Freese and Si Travis - Texas; Gene Rudow - Washington; George Pollock - Wisconsin; Helier Rodríguez - Cuba. Warrie Norton is listed as a past president of the Alumni Association.

Continuing the reunion review of "Who's Who," Lawrence D. Chellis is chief of the Climatic Chambers and Air Conditioning Branch of the U.S. Army Quartermaster Corps Research and Development Command Center, Natick, Mass. A widower, Larry has two daughters; Barbara, who was graduated from Simmons and the Brandeis Graduate School, and Dorothy, Massachusetts School of Art.

Edward R. Chilcott, of the famous VI-A group, is the owner of Technical Products Company, Los Angeles, manufacturers of metal products. He and Mrs. Chilcott have five children and six grandchildren. George A. Chutter, manufacturers' representative, Jersey City, N. J., and another of the famous Hexalphas, lives near Route 6-A in Connecticut. Son Raymond was graduated from Lehigh in 1949 in chemical engineering. Reinald, University of Pennsylvania '54, is a dental surgeon. Roger will graduate from Loomis next year.

Carole A. Clarke is assistant technical director, Federal Telephone and Radio Company, Clifton, N. J. Son Alfred was graduated from the Wharton School, University of Pennsylvania, in 1954, and is in the Army in Europe. Daughter Eleanor is Simmons '59. Philip T. Coffin, still another of that first VI-A group, manages the electrical industry sales of the Aluminum Company of America, Pittsburgh. Phil and Edna have three sons, two daughters and five grandchildren.

Vernon C. Cole is power production engineer, Connecticut Light and Power Company, Hartford, Conn. Madeline, Laurence, Chester, and Stephen all attended the University of Connecticut. There are seven grandchildren. Robert S. Cook has retired from his highway engi-

neering duties for the State of New York and divides his time between Fort Lauderdale, Fla., and his Canandaigua, N. Y., home. Bob is married and has no children.

Josiah D. Crosby is technical supervisor, Plastics Division, Industrial Products, Hood Rubber Division of the B. F. Goodrich Company, Watertown, Mass. Josh is married and has no children. Andrew Deane is vice-president of United States Steel Homes, Inc., New Albany, Ind. Stephanie and Andrew are at Sewickley Academy. Edwin F. Delany is assistant district manager of Hedge and Mattheis Company, Boston, Mass. He is married and has no children. Edouard N. Dubé has his own consulting engineering office in Boston, specializing in structural frames, heating, plumbing and electrical systems. Lucienne and Paul attended Boston University; Anne, Chandler School; Caroline is in high school. Chick has four grandchildren.

In this short month, a short note with your news will be gratefully received. — CAROLE A. CLARKE, Secretary, Federal Telephone and Radio Company, 100 Kingsland Road, Clifton, N. J.

## 1922

Dale Spoor is now a vice-president of Air Reduction Sales Company. The Company is de-centralizing and has set up three regions with headquarters in the metropolitan New York area, Chicago, and Houston, Texas. Dale is in charge of the Midwestern region with his office at 205 West Monroe Street, Chicago, and his home in a cooperative apartment at 2440 North Lakeview Avenue, Chicago.

Samuel I. Zack, Chief of the sanitary division of Gannett, Fleming, Corddry and Carpenter, Inc., has been awarded the James Laurie prize, a national award of the American Society of Civil Engineers for his paper on "Financing of Sewage Works in Pennsylvania." His technical paper, first presented in 1954 and the basis of the award, has been printed in a 20-page pamphlet issued by the A.S.C.E. This is one of a number of articles on sewage, waste treatment, and pollution problems which have been published under his name in technical journals.

Frank O. Rickers was the subject of a feature article in the Cincinnati *Enquirer* last fall entitled "Science Has Failed! — Elbow Grease Still Used to Clean Beer Tanks After Fermentation — Otherwise Technology Reigns." Rickers is brewmaster at Wiedemann's Brewery in Newport. Before coming to his present position four years ago, he was with the Schaeffer Brewing Company in Brooklyn. He says, "Beer making is an art and a warm human profession. Even though the guess-work has been taken out of it, it requires a lot of smelling and tasting."

Edward C. Fales last November 1 became president and general manager of Gunite Foundries Corporation in Rockford, Ill. Our Class was well represented at the Silver Stein Dinner held in New York November 14. At the head table were Crawford Greenewalt, Ted Miller, and George Dandrow, the latter two accompanied by their wives. At the other



tables were D. M. Broudy, Nathan Cherniack, John Church, Larry Davis, Arthur Frappier, Clate Grover, George Holder-ness, Harold Koch, Frank Kurtz, Sam Reynolds, and John Teeter. All of the above with the exception of Cherniack, Davis, and Holder-ness were accompanied by their wives.

The Alumni Association Directory for 1956-1957 shows the following members of the Class active in Alumni affairs: Ted Miller is president of the Alumni Association; Clate Grover is one of 10 members-at-large on the Alumni Council; Warren Ferguson is 1922's representative on the Council. The following represent M.I.T. clubs on the Council: Parke Appel, Urbana; Bob Brown, Worcester; Yard Chittick, Washington; Fred Dillon, Fort Worth; Oscar Horovitz, Haifa; Bob Tonon, Pittsfield; Karl Wildes, Schenectady; Fred Dillon is chairman of the Boston Luncheon Club, and Parke Appel is one of four members of the Committee on Personnel; Whit Ferguson is a member of the Alumni Fund Board. On the departmental visiting committees are Larry Davis, Course XIX, Meteorology, and Ray Rundlett on the Committee for Student Activities.

Many members of the Class continue active as officers of M.I.T. clubs. Roberto Ottonello is president of the Buenos Aires Club; Whit Ferguson is vice-president at Buffalo; Bill Huger is secretary in Atlanta; Norman Randlett is vice-president at Manchester, N.H.; Dale Spoor is one of the vice-presidents in New York; Claus Mollbach-Thellefsen is secretary in Oslo, Norway; Jack Liecny is president at Phoenix; Yochinori Chatani is president in Tokyo, Japan; and Bob Brown is vice-president in Worcester. On the Educational Council of the Institute are the following: Jack Liecny, Phoenix; Chuck Brokaw, Denver; Bill MacMahon and Bob Thulman, Washington; Bill Huger, Atlanta; Abbot Johnson, Muncie; Fred Koch, Wichita; Bob Purinton, Augusta, Maine; Bob Brown, Fitchburg; Preston Robinson, Williamstown; Ev Vilett, Short Hills, N.J.; Whit Ferguson, Buffalo; Tom Craig, Elmira; George Dandrow, Bill Mueser and Ray Rundlett, New York City; Dwight VandeVate, Rochester; Ed Gruppe, Syracuse; Paul Choquette, White Plains; R. A. Stone, Columbus, Ohio; Val Friedrich, Hamilton, Ohio; Phil Alden and Willis Stose, Philadelphia; Matt Taylor, Kingsport, Tenn.; Horace McCurdy, Seattle; Roland Becker, Milwaukee; Roberto Ottonello, Buenos Aires; John Bower, Cucuta, Colombia; and Werner Schoop, Zurich. It might also be remembered that 1922 has supplied the Alumni Association with two presidents in George Dandrow and our present president, Ted Miller.

Vice Admiral Leslie C. Stevens of Annapolis died November 30, 1956. — C. YARDLEY CHITTICK, *Secretary*, 41 Tremont Street, Boston, Mass. WHITWORTH FERGUSON, *Assistant Secretary*, 333 Elliott Street, Buffalo, N.Y.

## 1923

For those interested in home furnishings, William J. Hennessey, IV, has written a new book, *Modern Furnishings for the Home*, recently published by Rein-

hold. It is a comprehensive record in photographs of more than 580 examples of important contemporary furnishings that have appeared in the last four years. Hennessey completed the book after traveling throughout the nation interviewing home owners, architects, and interior decorators.

Jerome A. Watrous, XI, has been elected president of the Northampton Cutlery Company at that beautiful city in west central Massachusetts. Previously, he had served the Company for 17 years as treasurer. Born in Milwaukee and educated at Lehigh University and M.I.T., he worked for the Gorham Manufacturing Company in Providence for 13 years before going to Northampton. He is a director of the Northampton National Bank, Northampton Cooperative Bank, Community Chest, Y.M.C.A., Peoples Institute, and the Chamber of Commerce.

We regret to report the death of William B. Wingert, X, at Scarsdale, N.Y., on November 14. He was vice-president of the Semet-Solvay Division of the Allied Chemical and Dye Corporation where he had worked almost continuously since graduation.

Seth Gage Lewis, X, has taken over the management of the Fire Insurance Rating Organization of New Jersey, with headquarters at Newark. Chaplin Tyler, X, was elected alumni-term member to serve for four years at Northeastern University. He is associated with the Development Department of E. I. duPont de Nemours and Company.

News items are scarce this month. How about sending in a few letters to your hardworking secretary? — HOWARD F. RUSSELL, *Secretary*, Improved Risk Mutuals, 15 N. Broadway, White Plains, N.Y. WENTWORTH T. HOWLAND, *Assistant Secretary*, 1771 Washington Street, Auburn-dale 66, Mass.

## 1924

*Short Winter:* The travelling Ilfelds found their European tour cut short in a hurry. They took off from New York in September, landed in Norway, and started a leisurely trip south with the expectation of basking in the Mediterranean sun during the cold weather. They got as far as Vienna when things started to break loose in that part of the world. After a quick revision of plans they headed straight for Spain, boarded the S.S. *Exeter* along with their Thunderbird, and were back in New York by early December. Winter will be spent at home in Taos.

*Reunion in N.Y.:* The New York contingent missed out on a champagne send off, but they feted Max on his return with a luncheon at the M.I.T. Club. Ten of them did the honors, including the peripatetic Bill MacCallum, who somehow always seems to show up in the right places at the right times. Our worthy president, Pret Littlefield, presided in, we feel sure, his usual gracious fashion.

*More Schools:* Among the celebrants noted above was Director William H. Correale of the New York City Board of Education's Bureau of Construction. Bill made the news a few days before with an address to the Concrete Industry

Board. He gave them a bit of dope on the magnitude of his operation. His annual expenditures are at the rate of \$100,000,000 a year! That's a lot of school construction.

*Business Notes:* Stone and Webster Securities Corporation recently announced its pleasure at the election of Emmons W. Blodgett to the post of vice-president. Our pleasure, too. For long years, about 15, Jerome C. Hunsaker '12 has occupied the post of chairman of the National Advisory Committee for Aeronautics (N.A.C.A.). Recently his resignation was announced. His successor to this, one of the most important jobs in the aviation world, James H. Doolittle. The Air Force *Times* calls him "Jimmy, the Do."

*Mover:* Alaska, Burma, Bronxville — George Tapley has been moving around a bit during his career. Bronxville is his latest, probably not last, stop. The house he bought there is his sixth.

*Doldrums:* This is one of those in-between periods. During the summer your secretary gets a fair number of cards from you fellows from which to compile travel notes. At Christmas you thoughtfully shower him with cards, usually with some informative notations. As this is written, summer is over, the Christmas card flood hasn't arrived, and so the news is not heavy. However, the annual Alumni Association Directory just arrived, and you will probably be interested to know that this year four of your classmates are serving their time as M.I.T. club presidents (Clint Conway in Baltimore; George Fertig, Birmingham; Floyd Stewart, Cleveland; and Nish Cornish, Mexico), while several more are club officers of other varieties. Two are members of the M.I.T. Corporation; Ed Hanley and Jimmy Doolittle. Seven are members of the Alumni Council, governing body of the Alumni Association, while six more are on Departmental Visiting Committees, and an even dozen are Educational Counsellors, bird-dogging for the Admissions Office. A very creditable lineup, indeed.

Must put in a plug for our two impresarios, Nish Cornish and Mike Ameza. Nish is running the Ninth Annual M.I.T. Fiesta in Mexico, March 14 to 16, and Mike is one of the organizers of the first M.I.T. Weekend in Havana. That's from February 22 to 25. See the calendar in the Trend of Affairs for addresses if you'd like more dope. You'll see Ray Lehrer in Havana, for one. So much for now. — HENRY B. KANE, *Secretary*, Room 1-272, M.I.T., Cambridge 39, Mass.

## 1925

News seems to be rather scarce at this time of year. It would be appreciated if more of you could emulate Alex J. Rokiicki, VI-A, and drop me a note when things of general interest happen to you. Alex is with the New York Telephone Company, and due to their continuing growth, this company has recently established an additional area in Western Upstate New York, and Alex has been appointed division engineering manager of the area with his headquarters in Buffalo.

The General Motors *Engineering Journal* for June 1956, carried an article on

"Research Staff Facilities," to which John M. Campbell, Course X, was a contributor. This issue of the *Journal* carried a bibliographical sketch of John, who is technical director of the research staff at General Motors. He joined the Fuel Section of the research staff upon graduation, after which he was concerned principally with the development of the relationship between molecular structure of hydrocarbons and their knocking characteristics in internal combustion engines, leading to the development of today's high octane gasolines. In 1942, John was transferred to the General Motors Proving Ground to work on military projects, returning to the research staff in 1944, becoming head of the Organic Chemistry Department in 1947; assistant technical director of the Research Staff in 1952; administrative director in 1953; and director in August of 1954. He is a member of the Technical Advisory Panel on Fuels and Lubricants for the Department of Defense, and is active in many technical societies.

From the address which is furnished by the M.I.T. Alumni Register, we learn that Gabriel P. Rousseau, Course VI, who has been located in Montreal for a number of years, is now with UNESCO in Paris, France. It was also noted that Alexander Black, who attended the Institute with the Class of 1925, died on July 6, 1955. — F. L. FOSTER, *Secretary*, Room 5-105, M.I.T., Cambridge 39, Mass.

## 1926

I guess what happened to your secretary this month can be dubbed "getting caught with your notes down." At least, all of my reference notes are down at Rockport, and Ruth happened to see The Review reminder card on my desk indicating that notes must be in tomorrow. A middle-of-the-week deadline and nothing to write about is going to require some ingenuity. This isn't going to happen again though (I hope) because about two weeks ago your secretary concocted a return post card and sent it along to Don Severance, Alumni Secretary, for printing and mailing. By the time you read these notes, I hope each of you will have written something on the return part, and my problem will be how to squeeze all of the news into the available space.

I should have picked up some Class news while in Chicago last week but, instead of making phone calls to classmates in the little spare time available, I was horsing my sails out to the sailmaker. My sail bag is bright red so you can imagine the sensation caused when I boarded a DC-7 with this huge bag over my shoulder — a couple of weeks before Christmas. The knowing nods and grins all indicated that I was thought to be Santa Claus. I suppose you are wondering why a seafaring New Englander does business with a Chicago sailmaker? The answer of course is that he makes better sails, as evidenced by the fact that his sails were on the only American yacht to win a gold medal in the Olympics. In another few free moments I snuck over to a Volkswagon show room in the Loop where there was a cut-away chassis in the window. The little bug impressed me so that I rushed to place an

order for one upon returning home. I hope Jim Offutt, Johnny Wills, Nelson Wilmot, and the others will forgive me on the basis that we do not have the best sailmaker or a cutaway Volkswagon in New England.

The notices of the first Havana Alumni meeting have just arrived and look most enticing. They are in the office so I can put my hands on this much in the morning. Ben Howe has been suggesting a '26 reunion in Mexico, and I am beginning to think he has the nucleus of a good idea. Whether it is Havana or Mexico City, I think we would all enjoy it. It's a little late to get the Class organized this year, but why not mull it over as a possibility for the future? However, if any of you can make this year's event, it sounds most exciting. The dates are February 23, 24, and 25, and registration is being handled by A. H. Rodriguez '21, whose address is Concordia 61, Havana, Cuba. The registration fee is \$35 each person, and wives are invited. The charge includes sightseeing, cocktails and lunch on Saturday, banquet on Sunday and transportation, lunch and swimming at Varadero Beach on Monday. Sr. Rodriguez will also make hotel reservations for you. It sounds like a good deal, and we hope several '26 men will attend and give us reports. We will be back with you in a month, so till March, — Cheerio! — GEORGE WARREN SMITH, *General Secretary*, c/o E. I. du Pont de Nemours and Company, Inc., Room 325, 140 Federal Street, Boston 10, Mass.

## 1928

Max Parshall's letter to Ralph Joep, mentioned in last month's notes, contained so many items of news that we didn't get them all in. This will report the remaining ones. In changing over his activities from the field of chemistry to engineering (eight years after M.I.T.), Max earned himself a degree in civil engineering at Colorado Agricultural and Mechanical College. Since then he has taught nearly every subject in civil engineering. Daughter Marie has now started her college career at the school with special interest in music. All in all, the Parshalls appear to be living a very full and happy life. Max and wife, Mary, are planning to be at the 30-Year Reunion in June, 1958.

Two '28 sons were entered last fall in the Freshman Class: Malcolm D. Fraser is the son of Donald S. Fraser. George L. Kirk is the son of William J. Kirk. Our congratulations to you all, gentlemen, and our best wishes to Malcolm and George for a successful career at the Institute.

We have received two belated Class death reports which, with regret we must record. Miss Ida M. Lewis, Course VII, died November 11, 1955. James M. Shoemaker, Course XVI, died September 28, 1949. — GEORGE I. CHATFIELD, *Secretary*, 49 Eton Road, Larchmont, N. Y. WALTER J. SMITH, *Assistant Secretary*, 15 Acorn Park, Cambridge, Mass.

## 1930

We have been using the system of sending out postcards to 25 of our classmates each month in order to get infor-

mation and news about them. This has worked fairly well, and I know the rest of 1930 will appreciate each one taking the time to answer this request. However, we would also appreciate hearing from any one of you at any time!

From Lafayette, Calif., Howie Gardner sends word that he is continuing to have fun, as he has been, since going to California in 1947 as director of research and development for Fibreboard Products, Inc., a major producer of paperboard, corrugated shipping containers, and folding cartons. He says the packaging industry offers plenty of technical challenge. He and his wife, Teddy, celebrated their 25th wedding anniversary on October 24, 1956, with the companionship of their two daughters, 19 and 16 years of age. Their home is only 20 miles from San Francisco at 3312 Moraga Boulevard, Lafayette, Calif.

The Technology Review office has sent us the latest news about Joe Devorss, Jr. He was transferred by U. S. Rubber Company from Boston to Washington, D. C., as special representative for contacts with Federal Government Agencies. Les Berman has written to say that he has moved up to Boston, Mass., from New York with promotion to district sales manager of Johnson's Wax, after 25 years in New York. From New York City, Bob Armstrong sent us a news clip which states: "Dr. Robert T. Armstrong has been elected vice-president, technical director of Celanese Corporation of America, N. Y. Dr. Armstrong has been associated with Celanese in various technical capacities since 1946 and holds several patents in the fields of rubber, chemicals and synthetic polymers." Congratulations and good luck to Joe, Les, and Bob.

Ernie Reisner dropped us a note from Fairfax, Va., to say he has been living in Virginia, outside Washington, for the past three years and likes it better than he ever imagined he would. He has been with the Small Business Administration since its beginning in 1953, and is now the chief of the Production Assistance Division, helping small firms get defense contracts, and other items they require to keep going. He reports that he does not see many classmates, even at meetings of the Washington M.I.T. Society, but would like to. Ernie sends his best regards to all.

Ed Pritchard wrote from Haddonfield, N. J. He's been with Defense Electronic Products (military electronics) Division of R.C.A. since mid-1953. This division has about 11,000 employees, 1,100-1,200 engineers, and groups at Waltham, Mass., New York City, Los Angeles, and Camden, N. J. He has a coordinating job called "Technical Administration," and finds the work entertaining and rewarding. Says he still has one wife and two teen-age offspring (mixed pair). Asa Shannon sent word from Omaha, Neb., that he is presently chief, Technical Branch Engineering Division, Corps of Engineers, M.R.D., Omaha, Neb. This work concerns the design and construction of the Missouri River Development Program as well as military construction in this area.

I know you will all be sorry to hear that our classmate, Gordon Lister, who



has written to me from Mamaroneck, N. Y., had a session with polio last fall and winter. His note was cheerful, though, in that he states his recovery is now 90 per cent and that it doesn't bother him much. We will all root for 100 per cent recovery, Gordon. Incidentally, Gordon says he hasn't seen anything of his classmates for over a year and hence can't report on their activities.

In looking over the M.I.T. Alumni Association Directory for 1956-1957, issued in November, 1956, I discovered that five of our classmates hold office in the M.I.T. clubs across the country. They are: James B. Holden, Treasurer, M.I.T. Club of Akron (Ohio); Biagio C. D'Antoni, Secretary, M.I.T. Club of the South (New Orleans, La.); Walter S. Smith, President, M.I.T. Club of Oklahoma (Tulsa); Charles R. Pritchard, Jr., President, M.I.T. Club of New Hampshire (Manchester); and Richard M. Wilson, President, M.I.T. Club of Rochester (N. Y.).

I am very sorry to have to relay to you the sad news received from Mrs. Conklin at Riverhead, N. Y., that our classmate, W. Sweezy Conklin, passed away on July 17, 1955.

The following changes of address have been called to my attention: Ralph L. Appleton, 442 South Drexel Avenue, Columbus 9, Ohio; George Barkan, 401 Hollywood Avenue, Tuckahoe 7, N. Y.; Robert S. Cook, 1680 Washington Road, Apt. 308, Pittsburgh 28, Pa.; Colonel Homer L. Davis, Jr., 1105 North Quantico Street, Arlington 5, Va.; Joseph W. Devorss, Jr., 6806 Highland Avenue, Springfield, Va.; James D. Egleston, 136 West 16th Street, New York 11, N. Y.; Brigadier General Herbert W. Ehr Gott, 4818 Avondale Road, Washington 18, D. C.; Mrs. Frances Frazier, 204 West Evergreen, San Antonio, Texas; Leonard H. Goodhue, Jr., 40 Central Street, Winchester, Mass.; Paul H. Kimberlin, 416 South Third Street, Chester, Ind.; Dr. Sebastian B. Littauer, 430 West 116th Street, New York 27, N. Y.; Morell Marean, Bass Rock Lane, Marblehead, Mass.; Warren H. Martell, General Delivery, Miami, Fla.; George K. Nakashima, R.D. #2, Box 16, New Hope, Pa.; William S. Reeder, Gulf Refinery, Cleves, Ohio; Robert B. Rypinski, Ramo-Wooldridge Corporation, 5730 Arbor Vitae, Los Angeles 45, Calif.; John G. Senese, Jr., 5209 Monta Vista Drive, Charleston, W. Va.; and Herford B. Southwood, 313 Queen Street, Mount Pleasant, S. C. — GEORGE P. WADSWORTH, *Secretary*, Room 2-287, M.I.T., Cambridge 39, Mass. LOUISE HALL, *Assistant Secretary*, Box 6636, College Station, Durham, N. C. RALPH W. PETERS, *Assistant Secretary*, 249 Hollywood Avenue, Rochester 18, N. Y.

## 1932

Rolf Eliassen has had a letter from John Person, Colonel in the Engineers, who was a member of our Class in civil engineering following his graduation from West Point. Jack was formerly division engineer of the Ohio River Division with offices in Cincinnati. Now he has stepped up a notch and is assistant chief engineer for civil works, which is very close to the

top of the Corps of Engineers of the Army. He writes Rolf: "This means that I am responsible to the chief of engineers for supervision of our civil works program in the continental United States, Hawaii, and Alaska, including flood control, navigation and related water resource development. It is an interesting job and a fairly sizable one. We had an appropriation of something over \$636,000,000 in Fiscal Year 1957. Tom Lane, I, is still the engineer commissioner with the District of Columbia, and I see him much less often than I wish. I certainly hope that I will be able to make the 25th Reunion, but I have some rather serious doubts. My son graduates from West Point on June 4 and gets himself married on the 10th, so that my prospects for getting to Cambridge look a little slim at this time."

Minot Bridgman as one of the co-chairmen for the New York City area for our 25th-year Class gift writes: "The situation here is simmering along. I am still with the Electronics Division of the Metropolitan Life Insurance Company in New York as a senior supervisor. Up until a few weeks ago I worked on project development, but all of my time of late has been focused on equipment evaluation, looking forward to the purchase of additional computers for further applications. We have three Univacs now and even after they are converted to the Model II, we will still be far short of our needs. I am still hopeful that my son Robert will graduate from Tech next summer so that I can combine that exercise and the Reunion into one trip."

Frank Ikuno, now a lieutenant colonel, had a bit of bad luck. Just as he was about to be transferred from his job of full engineering responsibility for the Fitzsimons Hospital, the largest Army hospital in the country, in Denver, he had a heart attack, which held him up for three months. He is now on trial duty at Fort Ord, Calif., as deputy post engineer for the Engineering and Master Planning Section. Frank would like to hear from any of our classmates in the California area.

We've had news on the unfortunate death of two of our classmates. Frank Speir, who had risen to lieutenant colonel in the Air Force, was killed last July when his Army plane crashed and burned near Buffalo. The other death was that of Bob Parker. His sister Beatrice writes that he was killed in an automobile accident in August.

A card from Jim Smith advises that he is assistant chief engineer of Factory Mutual Engineering Division in Norwood, Mass. Jim gets over to M.I.T. fairly frequently since he is an Alumni Council Member. His nephew, Louis Hannauer, Jr., entered Tech this past fall as a freshman. Jim lives at 68 Standish Road, Wellesley Hills, is married and has two children.

Howard F. Atwood, living in Bolton, Mass., is with the Sales Department of the Lapointe Machine Tool Company in Hudson nearby. He has been with the company since 1934 and has had several different jobs in the shop and office. Laurence Nelson writes from Los Angeles where he is production manager of technical publications in the El Segundo Division of Douglas Aircraft.

A note from Bob Cunningham, 88 South Bayfield Road, N. Quincy, Mass., who is in real estate management: "First entered Tech in 1923. I managed to live through the depression, like broiled lobster (preferably not stuffed), and once drove my Cad to Jacksonville from Boston in a day." Nat Saltonstall is senior partner of Saltonstall, Morton and Morton, 53 State Street, Boston. Nat finds time to be a trustee of the Boston Museum of Fine Arts and of the Institute of Contemporary Art in Boston, and is a member of the American Arbitration Association. He is also president of the Mayo Hill Colony Club at Wellfleet on Cape Cod, which is a group of summer homes.

C. W. MacCartney is an industrial engineer with the Sperry Gyroscope Company, Great Neck, N. Y. Dan Passov is president of the City Plumbing and Heating Company of 15900 S. Woodland, Shaker Heights, Ohio. Dan is married and has three children. Prentice Bradley is practicing architecture in Pittsfield, Mass., under his own name. C. O. Perfall is paint representative for the Standard Oil Company of California out of Los Angeles and lives at 1903 Lakeshore Avenue.

Dick Funk is vice-president of the W-M Metal Works, Inc., 58-32 212th Street, Bayside, N. Y. His firm is a sheet metal contractor for air conditioning ductwork. Fred Rauskolb is sales manager for the Industrial Nucleonics Corporation, 1205 Chesapeake Avenue, Columbus, Ohio, makers of accurate measuring equipment. Captain W. C. Sprenger, U. S. Navy, one of our graduate friends, is supervising inspector of naval material in the Western District, San Francisco. — ROBERT B. SEMPLE, *Secretary*, Box 111, Wyandotte, Mich. WILLIAM H. BARKER, *Assistant Secretary*, 45 Meredith Drive, Cranston, R. I. ROLF ELIASSEN, *Assistant Secretary*, Room 1-138, M.I.T., Cambridge 39, Mass.

## 1933

Coincidentally with the reports of current events in the Middle East, two of our classmates who live in that part of the world have been mentioned in the news. Emile M. Bustani, I, who lives in Beirut, Lebanon, appeared prominently in a fall issue of *Business Week* in an article entitled "An Arabian Success Story." Emile is chairman of the Contracting and Trading Corporation, which is reputedly the largest Arab-owned company in that part of the world. In addition to running his far-flung business enterprises, Emile is a member of the Lebanese parliament and is being actively proposed for the presidency of Lebanon in 1958.

Niazi I. Mostafa, VI, who is secretary of the Cairo Rotary Club, recently sent an excellent summary of the Suez situation as seen by the top ranking Cairo businessmen of many nationalities. The Class takes pride in the important roles played by these two men on the international scene. We are reminded that Outerbridge Horsey has made a career for himself in the State Department and spent considerable time in middle Europe during the war.

Reporting on recent promotions and changes of position, congratulations to the



following: Maxwell D. Millard, VI, is now general manager of sales for the American Steel and Wire Division of U. S. Steel with headquarters in New York . . . to Paul F. Genachte, VI, who has become director of the Atomic Energy Division of the Chase Manhattan Bank in New York (prior to joining Chase, Paul served as a power consultant in Ceylon, Belgium, and Mexico) . . . to Alexander Sledge, XIII-A, who has become a professor of industrial engineering at Rutgers University . . . to Marshall P. Wilder, II, who has become engineer in charge of Du Mont's storage tube development program.

Among the members of the incoming freshmen at Tech last fall was Fozi M. Cahaly, son of Richard F. Cahaly of our Class. John Wiley and Sons recently announced the publication of the third volume of *Power System Stability* by Edward W. Kimbark, VI, who is dean of engineering at the University of Washington in Seattle. Robert Heggie, V, vice-president of American Chicle, took a prominent part last fall in a symposium on flavor research held in Cambridge. And Lynn A. Williams, Jr., II, who is president of the Anocut Engineering Company in Chicago, spoke last fall before the American Society of Tool Engineers. —GEORGE HENNING, *Secretary*, 330 Belmont Avenue, Brooklyn 7, N. Y. R. M. KIMBALL, *Assistant Secretary*, Room 3-234, M.I.T., Cambridge 39, Mass.

## 1934

A release received from Arthur D. Little tells of a series of symposia in flavor and odor research held in Cambridge last November. Among the contributions, we note that Dr. Ernest Lockhart was to discuss taste testing in the laboratory and for consumers. Having recently been an associate professor of Food Technology at the Institute, Dr. Lockhart is now scientific director of the Coffee Brewing Institute. This should give members of the Class the authoritative word on how to make perfect coffee!

Members of the steering committee for the Compton Scholarship Fund project have been meeting to plan the continuing program. Because of scheduling difficulties, Hank Backenstoss called two sessions, one of which was attended by Bob Becker, Joe Fishman, Les Doten, John Hrones, Dave Mooney, Roger Coffey, Hal Reynolds, Sam Blake, Mal Stevens, Roger Williams, Carl Wilson, Frank Baxter, Jink Callan, and your secretary. A plan to reach members of the Class who do not normally see this column was put into effect. In addition, the seventy classmates who last year worked in behalf of the fund will continue their efforts, so we look forward to an even more successful campaign this year.

Sam Blake tells us that Irvin Gahm, M.D., recently saw his daughter married, and we understand that Al Hurst's eldest daughter is also married. It looks as though a few members of the Class will soon be grandfathers, if indeed some are not already in this venerable state. We also hear that Bill Ball has been visiting colleges in the Boston area with his daughter, who is now in junior high

school. Bill is associate director for public relations for Ethyl Corporation.

Carl Wilson, after 22 years with American Optical Company, has joined the Foster-Grant Company in Leominster. Carl is connected with the sunglasses operation conducted by this company along with other plastic manufacturing. Roger Coffey says that Tom La Cava is living in semi-retirement with his family of five children on their farm in Suncook, N. H. As vacation from this condition, Tom travels for the state of New Hampshire in the interests of reducing pollution of its waterways. Roger speaks of Tom as a latter-day Thoreau, so we are delighted that we have a philosopher among us.

Wally Bird is president and treasurer of his own company, Birdair Structures, Inc., of Buffalo. Wally's company is developing and manufacturing air-supported structures such as the radomes and portable blown-up fabric buildings used by the military in the Arctic. Wally was formerly with Cornell Aeronautical Laboratory. —WALTER MCKAY, *Secretary*, Room 33-211, M.I.T., Cambridge 39, Mass.

## 1936

Last month we reported some of the high lights of the tremendously successful 20th Reunion at Swampscott, Mass., last June. In our enthusiasm to relate the facts we neglected to give credit to the hard-working committee who put so much time and effort into the organization and arrangements that assured its success.

Although there must have been some general conversation on the formation of a group to plan the event, our first piece of correspondence hinting at getting down to work was dated April 21, 1955. Hank Lippitt wrote a short note to a couple of dozen classmates: "We are trying to engineer a get-together for lunch, May 4, to talk about M.I.T. 1936. Tony Hittl, Gordon Thomas, Fletch Thornton, myself and a few others expect to be there — free meal. Call to give me your phone number." This was followed on the 26th of April by a form letter from Tony Hittl who earlier had been appointed reunion chairman by Jack Austin. Tony wrote: "At last we get ready to start organizing for our 20th Reunion. Hank Lippitt has offered to play host to us at a luncheon and you are, consequently, invited to a meeting at the Rainbow Room, R. C. A. Building, May 4, 1955." Although we did not realize it at the time, the most important word in this letter was "host." The meeting went off well and was well summarized in the minutes: "Perhaps on the assumption that the lunch was to be free, 11 members turned up. Two points were established: First, that the purpose of the Reunion was to have fun — and not raise funds! Second, that when Hank Lippitt plays host it still means that you have to pay for your own lunch."

Other "hosts" gave luncheons in quick succession and the committee was formed. General Chairman, A. E. Hittl; Secretary, Henry F. Lippitt, II. *Publicity Committee*: Chairman, James H. Leary; Associated Chairman — Regional and Course Publicity, Joseph E. Burns; Bos-

ton Chairman, Vincent T. Estabrook; Committee Member to Give Assistance Where Needed, George S. Trimble, Jr. *Finance Committee*: Chairman and treasurer, Marshall M. Holcombe; Committee Member to Give Assistance Where Needed, Alwyn B. Gray. *Arrangements Committee*: Chairman, P. W. Williams; Consultant, Gordon C. Thomas; Committee Member to Give Assistance Where Needed, J. F. Patterson. *Program Committee*: Chairman, Eli Grossman; Committee Members to Give Assistance Where Needed, C. Mallory Graves, Harry B. Hazelton, Harold F. Miller. *General Committee*: Joseph E. Burns, James R. Craig, Richard A. Denton, Vincent T. Estabrook, C. Mallory Graves, Alwyn B. Gray, Eli A. Grossman, Harry B. Hazelton, A. E. Hittl, Marshall M. Holcombe, James H. Leary, Henry F. Lippitt, II, Harold F. Miller, James F. Patterson, Gordon C. Thomas, G. S. Trimble, Jr., Pyam W. Williams, and Robert E. Worden. These fellows all did a "bang up" job, and the Class is greatly indebted to them. Tony, Hank, and Mal deserve any extra cheer for the masterful organization of the whole affair.

We mentioned in last month's notes that several of the reunion's activities, including the Class meeting, would be covered in detail later. However, we should mention now the new list of Class officers. Hank Lippitt and Bob Worden asked to be relieved of their jobs as secretary and treasurer — we all know what a terrific job they did, and many thanks. Send all flowers and telegrams to Hank at 34 East 38th Street, New York 16, N. Y., and to Bob at 458 Moreno Road, Wynnewood, Pa. The New Lineup: President, John C. Austin, 704 Kent Road, Kenilworth, Ill.; Secretary, James H. Leary, 1 Putnam Park, Greenwich, Conn.; Treasurer, Eli A. Grossman, 27 Parkway Drive, Rye, N. Y.; Class Agent, Vincent T. Estabrook, 25 Varick Road, Waban 68, Mass.; Special Gifts, Robert E. Worden, 458 Moreno Road, Wynnewood, Pa.

Due to the workings of The Review, requiring that this material be in two months in advance, one might classify everything as old news. However, we have a collection of news items, some of which are very old, some just old, others questionable. Bill Shockley of Mountain View, Calif., shares the Nobel Award in Physics with two other Americans. Dr. Frederick K. Watson of 150 River Road, Wilmington, has been named assistant manager of the Plastic Sales Division at the Du Pont Company in Wilmington, Del. Colonel Aldo H. Bagnulo made district engineer of the Eastern Ocean District — he had served the district as area engineer and assistant engineer since 1954. He lives with his wife and four sons at 121 Sherman Avenue, Teaneck, N. J. Earl Kinsman, President of Kinsman Manufacturing Company, Inc., Laconia, N. H., announces that his firm will produce, among other things, electric organs and bicycle radios. Paul Morgan is now with Pacific Pumps, Inc., as sales engineer for their New York Office. Paul's home address is 43 Short Hills Circle, Millburn, N. J. Phil Grant has been elected secretary of Union Mutual Life. The doctor of philosophy degree has been

conferred on Scott Rethorst of Piedmont, Calif., by California Institute of Technology.

Semon Knudsen takes over as Pontiac's general manager. He had been general manager of the Detroit Diesel Engine Division since March 1955. Dr. Robert Woodward, Professor of Chemistry at Harvard, received the honorary degree of doctor of science at Yale.

Send all "stuff" to — JIM LEARY, *Secretary*, 1 Putnam Park, Greenwich, Conn.

## 1939

News since last writing is thin. However, George Cremer, who is with Solar Aircraft in San Diego, phoned last week to say he was not so thin any more, and he mentioned a thing or two about his ever-livin' (nee Billie Tyson, and of Emerson), so that we may have news that George and Wiley Corl are tilting or jousting across the continent for championship in a certain category — but more of this in the future.

Had a nice long letter from Nils Rosenberg'40, who says that occasionally some of his classmates read our notes. I suspect the lessons they find in this column won't be as vivid as the one we offered Field Day in the fall of 1936. However, I'll pass along a few notes from Nils about Alumni of our vintage. He says: "My business hasn't made the progress I thought it should this year because the farmers and the contractors are having it tougher. [Nils sells Allis Chalmers tractors in the Pacific Northwest.] But we are still working away at it, and yours truly is still out there peddling the bull to anyone who is willing to listen. Every now and then some poor fellow cannot stand it any longer and buys a tractor to get out from under."

Nils went to Norway this year and, at Oslo, saw Olaf Rustad'40, "... who hadn't changed an iota, had a good job, was single, and was enjoying life immensely." Nils saw Tom Cremer'40, Chappie Halstead'40, and Hans Otto'40 in New York. Said Tom had been elevated at the bank, but I didn't know whether Nils was referring to the raised platform on which Tom sits at the bank or to Tom's title of vice-president at the bank. Nils said Hans Otto has oodles of kids and a sweet wife (Wellesley), and that he visited Chappie after dinner.

Nils is very active in Star boat racing in Seattle, has a mantle full of silver trophies, and will be pleased to correspond with those who care to write him at 3915 E. Pine, Seattle, Wash. Maybe some of the Wellesley gals would like to write to his better half, formerly Janet Davidson. And for the Wellesley gals who don't write Janet, there's always me, who likes to get letters and pass along some news. — HAROLD SEYKOTA, *Assistant Secretary*, 416 Calle Mayor, Redondo Beach, Calif.

## 1940

Milt and Gitty Green sent a 1040 Form to announce the arrival of Ronnie Erica on October 28, 1956, as a new tax exemption. Mel Jackson became vice-president of CGS Laboratories, of Stamford, Conn., during the past year.

Loren Wood is now the assistant to the coordinator of patent engineering at WHQ group in International Business Machines. Previously, he was manager of Exploratory Research and Development and a member of the Patent Disclosure Review Board in the Patent Development Department of I.B.M.

Art Robbins is now director of product scheduling at Campbell's Soup Company. Bob Dorsey, who is an illumination engineer, had a narrow escape recently when a seaplane in which he was a passenger crashed into Lake Erie as it was taking off from Lakefront Airport in Cleveland, Ohio. Bob was able to get out of the plane and climb down to one of the pontoons from which he was rescued by a Coast Guard boat.

Slim pickings this month. A few letters directed to either Marsh, Sam, or Al will lengthen subsequent columns. — ALVIN GUTTAG, *Secretary*, Cushman, Darby and Cushman, American Security Building, Washington 5, D. C. SAMUEL A. GOLDBLITH, *Assistant Secretary*, Department of Food Technology, M.I.T., Cambridge 39, Mass. MARSHALL D. MCCUEN, *Assistant Secretary*, 4968 West 14th Street, Indianapolis, Ind.

## 1941

Marge Stewart writes (November 14): "At this point, Carl is practically 'weaned' from the iron lung. Of course, he will remain in the rocking bed until he has completely mastered breathing on his own. Once this is done, he can be moved to the main part of the hospital for the actual therapy to begin. He still has a long road ahead of him, but we all have confidence he will some day regain his full strength." Carl was stricken with spinal polio on September 10, and will be needing a lot of encouragement in regaining his health. Why not send him a card or letter? The address is: C. M. Stewart, 1498 Letchworth Road, Camp Hill, Pa.

A three-column spread in the business section of *The Washington Post*, accompanied by a picture of Bill, was headlined, "Case of Mistaken Identity Launched Ahrendt Firm." The story contained so much of interest that it seems to be worth quoting: "A case of mistaken identity launched the meteoric business career of William R. Ahrendt — engineer, instructor, author, and 36-year-old president of a firm with annual sales of \$2 million. It happened in 1947 when Ahrendt was a project engineer on automatic controls with the Navy Department. One night he was to deliver a lecture before the American Institute of Electrical Engineers. His introduction was apparently garbled because one member of the audience, thinking him an independent consultant, asked later whether he could undertake a special project. This was to devise a control system that would keep a 50-foot diameter antenna positioned on a star. The scheme was 'hare-brained,' Ahrendt recalls now with a grin, but it convinced him there were limitless opportunities in automatic control engineering.

"Later that year he invested \$10,000 in a two-room office on Kennedy Street,

N.W., named it the Ahrendt Instrument Company, and promptly landed a \$50,000 Government contract for classified work. At the beginning, according to the firm's brochure, 'belief in the company was the major asset, and the purchase of a Sears Roebuck drill press the subject of a top-level conference.' Things change, and Ahrendt's firm changed faster than most. In March, 1949, it was already a 40- by 60-foot building at 4910 Calvert Road, College Park, Md. Now, after four expansions, the company's home is a 36,000 square foot low-slung red-brick building, completely air-conditioned and dust-controlled, and crammed with the latest Swiss and American precision machinery.

"Most of the company's work is for the Defense Department. One example is a computer that solves mathematical equations simultaneously and automatically for gun-fire control and for navigating ships and planes. Ahrendt is most proud of the firm's ability and reputation to work consistently within tolerances of a few ten-thousandths of an inch. In 1951, the Navy recommended to Bausch and Lomb that it farm out to Ahrendt the servo-mechanism for a fire control telescope that had to be far more accurate than the Navy had ever required before.

"Many of the firm's products are developed by its own engineers. Fifty of the 175 employees work in research, development, and design. The only commercial product which the company developed, and on which it has an exclusive patent, is an automatic seriograph. This is an auxiliary to an X-ray machine used to detect brain and heart tumors. It takes pictures in rapid succession of a fluid, opaque to X-rays, that is injected into the blood stream. The tumor is located when the fluid is shown to follow an abnormal course. Fourteen seriographs are in use in Washington at the present time.

"The company's operations are highly decentralized. The heads of the five operating units — engineering, contracts, manufacture, finance, and services — have independent authority to spend and make decisions. Ahrendt's chief lieutenants are all under 40. One, Charles M. Donoho, the director of contracts, was the firm's first employee. Last year Ahrendt led his company into a happy marriage with Litton Industries of Beverly Hills, Calif. One purpose of the merger was to nullify some of the risks of one-man ownership for his family (a wife and three children) and for his employees. For the past decade he has taught part-time at the University of Maryland School of Engineering. He has co-authored a book, *Automatic Feedback Control*, and published *Servomechanism Practice* in 1954."

I have no doubt that many other men in the Class have achievements as interesting as Bill's to tell about. Don't hide your lights under bushels, or wait for your story to be published in the paper! Write directly to either of the gentlemen below, and we'll be glad to publish any and all details you wish. — IVOR W. COLLINS, *Secretary*, 28 Sherman Road, Wakefield, Mass. HENRY AVERY, *Assistant Secretary*, Pittsburgh Coke and Chemical Company, Grant Building, Pittsburgh 19, Pa.



It looks like it's going to be a grand big party. Fifty classmates and their wives have already made plans to come, and another 58 are interested in all the details although their commitment is not definite. These returns are just from the first 113 reply cards. On the off-chance that any readers have forgotten to send in their \$3 Class dues (which pays for the reunion mailings to the whole Class and all planning activities before the big weekend, next June 7, 8, and 9), please join the 153 paid-up men and send them along to the address below. In next month's Review we hope to list the names of all those expecting to be with us at the Chatham Bars Inn.

Along with the checks have come more nice newsy notes. From Don Berkey: "Just a few lines about the Berkeys. Five days ago we moved to Cincinnati where I have started a new assignment with the General Electric Company. It is with the Flight Propulsion Laboratory Department where I am manager, Applied Research. The work is about as broad as the words imply, including aerodynamics, combustion, advanced mechanics, metallurgy, and chemistry. We (Doris and I) have what we think are three fine boys, ages 6, 8 and 11. Our plans for the future include the Chatham Bars Inn for next June." Congratulations are much in order, and thanks for taking care of the financial matters in the midst of the rush of moving and getting settled.

Charlie Stempf received his mail in Montevideo, Uruguay, by way of Harrison, N. J., and Caracas, Venezuela. His check came directly by air mail, and we are all hoping he makes it to Cape Cod next June. Monroe Brown also sends his warm greetings from New Jersey to all. Also heard from Harvey and Elly Kram and from Chuck Steele. Chuck sends his greetings and dues from California, but is afraid he won't be able to make this reunion from way out there. "Ah, now I only have one wife, three girls, two boys, and one house to worry about." We are looking forward to seeing all seven Steeles at our 20th Reunion!

Maxwell Kaplan ("... currently unmarried, but hope to change this situation sometime in the next few years") sent a long letter: "I have wanted to write to you for about five years — so here goes. I have been looking forward to this reunion with a sense of great anticipation. In fact, I started a fund of \$2 per week almost three years ago.

"After seven years of research and development at North American Aviation Company, I left in May, 1953, to become the metallurgist for the Propulsion Department of Hughes Aircraft Company, located in Culver City, Calif. Recently I have transferred to the Plastics Department in the Research Laboratories Division of Hughes Aircraft Company and am currently engaged in Jet Vane and Radome studies for ballistic missiles. I am still active in the Air Force Reserve Program, and recently completed a most stimulating Active Duty Tour at Edwards Air Force Base, where I am assigned for active duty training. I am still a Major, but hope to retire as a Colonel (thanks

to R.O.P.A., the Reserve Officers' Promotion Act).

"All of my spare time has been spent doing research work on investments and tax-avoidance methods. (Tax-avoidance is the legal method of doing what tax-evaders go to jail for.) I have a private investment management company and a group of very contented clients, whose investments in stocks and bonds I have been managing for a period of almost nine years. I am eagerly looking forward to seeing you and all the gang." Thanks, Mac, for all the enthusiasm and for bringing us up to date.

A note from Hartford tells us that Marshall McGuire joined Pratt and Whitney Aircraft a year ago and was recently promoted to purchasing agent, Raw Materials Section. Ralph G. Mork was promoted to assistant manager of International Business Machine's Endicott Product Development Laboratory. He has been with I.B.M. since 1949 and has been associated with various phases of engineering work. Since last April, until his latest promotion, he was manager of Components and Special Development Projects.

A bulletin from the Standard Register Company of Dayton, Ohio, reports that Dr. Robert T. Olsen, who took his Ph.D. in organic chemistry with us, has been appointed assistant director of research. Before coming to Standard Register, Dr. Olsen was with the Celotex Corporation at their Marero, La., plant where he concentrated on organic fibers. He has also been associated with the Plymouth Cordage Company, General Aniline and Film Corporation, and the Eastman Kodak Company. He received his B.S. from Newark College of Engineering and his M.S. from Columbia University in New York City.

A card from Robert Wilson, Jr., records that he is currently branch manager of the Dayton office of John J. Nesbitt, Inc. And a memo from David Baltimore reads: "We're looking forward somewhat eagerly to the 15th, not because we're getting so old, but to see the fellows again. Have seen some of them at the M.I.T. banquet in New York last spring. Very thrilling affair. Things are going along hectically but fairly well. We have the World's first one million watt TV station. I'm not sure this is a real mitzvah or not, but at least it's an exciting business, and all the things my Dad and I have planned for the last 25 years are slowly bearing fruit. Color TV is now the rage, and we're going into local color as well in the next month or so." David and his Father run WBRE in Wilkes-Barre, Pa., and have the best wishes of all of us in their new endeavors.

William Van Alan Clark, Jr., Associate Professor of Industrial Management at Tech, became Assistant Dean of the School of Industrial Management. Dean Clark received his B.A. from Williams College in 1941 and his M.S. with us. (See the December '56 Review for more details.) Just recently, under the auspices of the Technology Community Association, he gave the Skeptics' Seminar on "Ethical Problems in Business."

Please remember to send in your reunion registration and any unpaid Class

dues. — LOU ROSENBLUM, *Secretary*, Photon, Inc., 58 Charles Street, Cambridge 41, Mass.

## 1943

When you read these notes in February we will probably have two or three feet of snow here in New England and be in the middle of a terrible winter. Perhaps during the long winter nights to come you will all remember your lonely Class secretary and write him some news for these notes. Oh, how I envy those Class secretaries of the earlier years who consistently fill three or four columns every month.

I noticed from the change of address list I recently received that Bert Saer has moved from California to Sunning Hill, Berkshire, England. Ken Vincent recently joined the Research Department of the Westvaco Mineral Products, Division of Food Machinery and Chemical Corporation, where he is the director of their Newark, Calif., Research Department. Ken lives in Palo Alto, Calif. The McJunkin Corporation, of Charleston, W. Va., has opened a new sales office in Pittsburgh. Howie McJunkin is vice-president of this company.

The Class of 1942 is planning its 15th reunion and, from reading their notes, it promises to be a colossal success. We intend to send some spies to their affair to get some ideas for ours which is only 18 months away. — RICHARD M. FEINGOLD, *Secretary*, 49 Pearl Street, Hartford 3, Conn.

## 1945

To pass the time of day nervously awaiting the arrival of offspring No. 2, I shall attempt to throw together something for your eager eyes to feast upon.

We have not received any communications from you worthy classmates over the past month, but I thought it might be interesting to provide a list of those people in our Class active as honorary secretaries throughout the country. Unfortunately, we have very few honorary secretaries in our Class, but certainly a "well done" should be offered to the following: Vincent K. Butler, Jr., Warren H. Miller, Robert D. Birkhoff, Alfred J. Oxenham, T. I. Stephenson, 3d, Ed Stoltz, Jr., and Julian Gammon. The latter four comprise upwards to 50 per cent of the Pittsburgh area contingent.

I suppose some type of an award should be provided for Vincent Butler at the time of our 15th Reunion, for he just called from San Francisco to indicate that he had been selected for promotion to lieutenant commander. Unless I am mistaken, he is the first member of our Class that was in the V12 unit to make this rank. Possibly we should make arrangements whereby he could exercise his naval capacities in the form of active duty.

The doctor just walked into the waiting room to tell me we have been blessed with a bouncing baby daughter born this sixth day of December, to be named Elizabeth Bradley. I shall now commence the celebration. — C. H. SPRINGER, *Secretary*, 420 Lexington Avenue, New York 17, N. Y.



The return of questionnaires from Howard Perlmutter's letter in October has been overwhelming. As of this date, December 8, I have received an even 100 returns, and they are still coming in. We can't possibly cover all this news in one or two columns, so we will have to serialize it through the rest of the publishing year. And away we go.

Roger Sonnabend writes from his home on Malia Terrace, Chestnut Hill, Mass., to say that he is vice-president and general manager of the Hotel Division of the Hotel Corporation of America. While traveling, he suggests that we stop at his hotels, the Roosevelt in New York, Mayflower in Washington, Cleveland in Cleveland, Edgewater Beach in Chicago, or the Somerset in Beantown. Gilbert Marr has recently changed jobs and now is a civil engineer with the Ebasco International Corporation in New York. He lives at 55 Schoharie Street, Staten Island, N. Y. Bill Brace was married in September 1955 to Margaret Grant, and they make their home at 11 Arlington Street, Cambridge. Bill is an assistant professor of geology at M.I.T.

Robert S. Loomis lives on Mountain Road in Granby, Conn., and maintains his business office in Windsor, Conn. He is a professional engineer, specializing in structural engineering for buildings. He earned his S.M. from M.I.T. in 1948, is married and has two boys and a girl. Raymond A. Dexter lives at 1120 S. Ainsworth Avenue, in Tacoma, Wash., and is a Salvation Army officer, in command of activities in Tacoma. Theodore Bacon, a member of 1946 graduate class, is an associate dean at Amherst College, and is very active in city planning work. He is teaching city planning at the University of Massachusetts, has been a member of the Amherst Town Planning Board since 1948, has been treasurer of the Massachusetts Federation of Planning Boards, and has done consulting work on town planning and zoning in Massachusetts.

Frank McCarthy received his B.A. in English at Tufts in 1949, and his M.S. in Journalism from Columbia in 1952, and is now associated with the Berkshire Eagle Publishing Company in Pittsfield, Mass. He was married in May of 1956, and lives at 244 Main Street, Lee, Mass. Robert Zucker lives with his wife and two children at 11 Pembroke Road, Louisville, Ky., and is an assistant professor of mechanical engineering at the Speed Scientific School, University of Louisville. Bob is a professional engineer in Kentucky, and is a trustee for the city of Lincolnshire, Ky. Ralph W. Rawson, another member of 1946G, has finally resigned from the Navy as a commander after having been on continuous active duty since his graduation from the Naval Academy in 1939. He is chief engineer of the Fansteel Metallurgical Corporation in Chicago, and he and Julie have settled down at 210 West Deerpath, Lake Forest, Ill., in order to educate their two boys and two girls in the "best school system in the United States." Ralph is active in Boy Scouts, church and community activities, and is very happy to have stopped roving.

James A. McFadden, married and father of two children, lives at 210 Whitmoor Terrace, Silver Spring, Md. He earned his Ph.D. in physics at the University of Michigan in 1951, and is a physicist at the Naval Ordnance Laboratory, specializing in applied mathematics, probability, noise, and stochastic processes. (How's that again, Jim?) Seymour Collins is a research engineer with the Jeffrey Manufacturing Company in Columbus, Ohio. He and his wife, Virginia, and their two children, live at 4904 Elks Drive, Columbus, Ohio. Lewis T. Mann, Jr., has been keeping busy these last few years. After M.I.T., he went to Columbia where he earned his A.M. and Ph.D. in 1951. Then he spent two years as senior chemist and administrative assistant to the president of Riker Laboratories, Inc., Los Angeles. Followed two years in the Army, which he left as a captain in September, 1956. He is now a research fellow at the Harvard Medical School, in the Cold Injury Laboratory, investigating the effects of cold and freezing injuries to animal tissue. He has remained a bachelor so far, but is interested in a change of status if the opportunity presents itself. Reverend Ellsworth E. Koonz is a priest in the Episcopal Church, 281 4th Avenue, New York City. He, also, has managed to escape the blessings of matrimony so far.

Ju Chin Chu is a full professor of chemical engineering at the Polytechnic Institute of Brooklyn. He is also a consultant in chemical engineering, nuclear technology, ram jets, solid propellants, distillation and heat transfer to the government and various private concerns. He is a fellow of the American Association for the Advancement of Sciences. Ju is the current president of the Chinese Institute of Engineers in the United States, and is a member of the Research Committee of the A.I.Ch.E. In addition to his many research papers in the fields of chemical engineering and petroleum refining, Ju has contributed "Film Theory" and "Thermodynamics" to Kirk-Othmer's *Encyclopedia of Chemical Technology*. He has "Heat and Mass Transfer" in Othmer's *Fluidization*, and is senior author of two other books, *Distillation Equilibrium Data* (Reinhold, 1951), and *Vapor-Liquid Equilibrium Data* (Edwards Brothers, 1956). Wedged in among all his other interests, Ju is finding time to raise three sons at 34 Linden Street, Garden City, N. Y.

Beverly Jane Beane has been working as an aerodynamics engineer, engaged in theoretical aerodynamics research at the Douglas Aircraft Company, Inc., Santa Monica, Calif. She is currently on leave from that job and is living at 34 Berkeley Street, Fitchburg, Mass., and is attending graduate school at M.I.T. Dave Sherrick has recently been promoted to chief systems engineer of the Kleinschmidt Laboratories, Inc., of Deerfield, Ill., having previously been their manager of research and development services. Dave lives at 2163 Brentwood Road, Northbrook, Ill. Marvin and Dorothy Sparrow and their two children live at 192 Wiswell Road, Newton Centre, Mass. Marvin received his LL.B. from Harvard Law School in 1950, became associated with the Boston law firm of Goulston and Storrs, served

two years with the Air Force during the Korean conflict, and is back again with Goulston and Storrs.

Leon F. Graves is an associate professor of physics at the University of Houston, Houston, Texas. He has one daughter, and the Graves live at 4380 Ruth, Houston, Texas. Last summer, Leon took a summer job with Convair, Fort Worth, Texas, as senior nuclear engineer. Dave Moyer has left General Motors, where he had been a project engineer for four years, and has again gone into business for himself as a consulting engineer, measurements and controls. He and Ann have two sons and a daughter, and they live at 94 Patterson Road, Dayton, Ohio. They bought an old house there five years ago and are slowly fixing it up themselves. Dave has already installed a three-ton water-cooled, air conditioner which, he says, really makes the place livable during the hot Miami Valley summers. His latest project is a hi-fi system with a portable AM-FM tuner and preamplifier, which can be plugged in all over the house. There are speakers in the bedroom, living room, kitchen and basement. The next project, already underway, is a transistor intercom for talking throughout the house and also to the front door. Dave reports that business last year was very good, and in fact that was the reason he couldn't make it to the reunion, because he was up to his neck in work. I know of a way to get him to the next reunion. Everyone please write to Herb Hansell and suggest Dave as the next reunion chairman.

This is only a start into the big pile of questionnaires in front of me, but it will have to do until next month when we'll have the next chapter in the 1956-1957 edition of "Who's Who and Where, M.I.T.'46." — JOHN A. MAYNARD, Secretary, 15 Cabot Street, Winchester, Mass.

## 1947

Each appearance of these Class notes brings the fabled reunion week end one month closer — just over four months away now, so presumably you are all getting your affairs in order to allow you and your wife to join the throng heading for Lenox for the week end of June 8 and 9. The wives can take a lead from Stuart Farnum's better half, Gloria, who writes: "Please forgive Stuart for not writing or answering any of the mail that comes in from the M.I.T. Alumni. His job keeps him pretty tied down, and he spends much of his time traveling. He's been with Sperry Gyroscope Company for nearly eight years now. His present capacity (see if I can get this straight) is 'Supervisor Field Service Engineering — Contracts and Contractor Maintenance Service.' (Probably the longest title in the Company!) We spent a couple of years in Europe where our third child was born, and now we have settled permanently on Long Island. Thank you for inviting us to the 10th Reunion next spring. I'd simply love to go, and I promise to do what I can to promote the trip. I'll look forward to meeting you then."

Don Van Greenby forwarded his Class dues with the note: "I am planning on attending our 10th Reunion. I trust you

are in good health." (Couldn't be better, Don.) John Williams and Ed Townsend have also sent in their dues to swell our very marginal treasury. A line of encouragement comes from Bob Drye: "The preliminary plans for the reunion sound very attractive. I guess it's the old story of something cutting both ways. My wife, Vivian, and I became the proud parents of twin boys, Richard and David, last June. We get a lot of kicks out of them, but I'm afraid they make the reunion out of the question both geographically and financially. I hope, for the sake of the committee, that not too many of our classmates are so pleasantly paralyzed." Jack Lehmann, who married Lois Bennett of Smith College last May, now lives in White Plains, N. Y., and manufactures nylon snow suits for the infant trade. What better place than Lenox and what better time than June to merchandise snow suits, Jack? Fred Ehrich, whose peripatetics have been reported in earlier columns, is now in Kansas City, Mo., as an advisory engineer with the Aviation Gas Turbine Division of Westinghouse.

Howard Douglass is an aeronautical research scientist in the Rocket Branch at the Lewis Flight Propulsion Laboratory of the National Advisory Committee for Aeronautics, and is presently serving a term as secretary-treasurer of the Cleveland-Akron Section of the American Rocket Society. The house designed for the Peacock Farms development in Lexington by Walter Pierce and the late W. Danforth Compton, both of our Class, has been selected by *House and Home* to be exhibited in the National Association of Home Builders Hall of Fame in Washington. Dan Fink '48 lives in the development, and if his home is an example, these houses are near the ultimate in design and living convenience and pleasure. A recent advertisement of the Bell Telephone Laboratories featured Dr. J. W. Fitzwilliam, who took a Ph.D. with '47 and is now leading the development of Bell's 11,000 megacycle microwave system.

Just a few items in closing. Norm Holland and wife, Jane, are now faculty residents at Baker House. On a trip to San Francisco last fall, I had dinner with Bob and Jen Warner at their home in Palo Alto. Their year-old daughter, Kathy, stayed up specially to say hello. Bob is at the Ames Lab of the National Advisory Committee for Aeronautics. Dick Mooney, with the Continental Oil Company in New York, married Mary Elizabeth Park of Haverford, Pa., last October. Much better to compare notes personally at the reunion, rather than reading them here. So why don't you all come? You'll make my job a lot easier. See you there. — CLAUDE W. BRENNER, *General Secretary*, 100 Memorial Drive, Cambridge 42, Mass.

## 1951

More marriage news: Last summer Dick Reuther was married to Nancy Wright of Clinton, N. J. Dick is now working for Scott Paper Company and living in Swarthmore, Pa. Denny Spangler exchanged vows in October with Louise Limbach of Hudson, Ohio. Denny is working for Thompson Products in

Cleveland since his discharge from the Navy early in the summer. Hal MacKay, who is with General Electric in Cincinnati, was also married last summer. John Morgenthauer was married last June 23 to Kathleen Ann Merriman in Cincinnati. John is in the Exploratory Development Department of Procter and Gamble, where he has been working on applications of fluidization since April, 1954. His wife is a fourth grade teacher.

Hank Marsh recently visited Bob Gooch in Fort Worth while on a business trip to Port Arthur. Hank is in the Product Development Laboratory of Owens-Corning Fiberglas in Newark, Ohio. Hank completed duties in the Army last year. His daughter, Kennan, is now one year old. Marv Baker joined the Pilot Plant Section of the Research Department of Shell Oil in Houston, Texas, shortly after receiving his M.I.T. doctorate last June. Marv, it seems, likes student life, for he is doing evening studies at the University of Houston. He writes that he visited Jim and Cynthia Pitcock last spring, and that Jim is now in St. Louis for his second year of internship. Bob MacCallum joined Electro Metallurgical Company, a division of Union Carbide and Carbon, last June to work in sales. Prior to that Bob spent two years in Japan and Korea selling machinery for the American Trading Company.

Warren Stewart was recently appointed assistant professor in the Chemical Engineering Department of the University of Wisconsin. He left the Sinclair Research Laboratories, where he had been employed since 1950, but he continues with them on a consulting basis. He has three children: Marilyn, seven, David, five, and Douglas, three. Pang Woo is now working in the California Research Corporation, a subsidiary of Standard Oil of California. George Saunders is assistant professor of architecture at Tulane University, and has a private practice in New Orleans. He is the holder of four Progressive Architecture awards as well as other awards. Dave Esty spent five years with the Creole Petroleum Corporation in Venezuela before the Navy beckoned him. He is now stationed at Roosevelt Roads, Puerto Rico, in the Engineering and Design Section of Public Works. He was married in July of 1955 and looks forward to his return to civilian life sometime this year.

Pratt and Whitney recently announced promotions of two '51 men: Joseph Flagge was promoted to designer at the Boston Engineering Facility; Ben Schranze was made a designer in the Engineering Department. Herbert Graham recently entered the California Institute of Technology to work for his M.S. in aeronautics. Solomon Levine is associate professor of labor and industrial relations at the University of Illinois. Robert Bartels became the director of planning for Hartford, Conn., last December after spending the last four years directing the Shenango Valley Regional Planning Commission at Sharon, Pa. He has also served three years in Westchester County, N. Y., planning agencies, and three years in Poughkeepsie, N. Y.

Walt Massey sent in a very newsy letter of his activities. Walt has been quite active in stage, radio, and television, and

has appeared in over 100 productions in lead and second lead roles in England, Canada, and the United States. Last spring he concluded six months in Houston, Texas, as leading man for the Playhouse Theatre there. He spent the summer doing Shakespeare in Manhattan, and in the fall he toured Canada. His latest role has been in "Mister Roberts" at the New York City Centre. Walt attributes his unusual success to work and the Tech training that enables him to "think straight and constructively in a 'business' filled with undisciplined people." — RICHARD W. WILLARD, *Secretary*, Box 105, Littleton, Mass. ROBERT S. GOOCH, *Assistant Secretary*, Freese and Nichols, 407-410 Danciger Building, Fort Worth 2, Texas.

## 1952

Lots of news to report this month, so I'll dispose of the usual attempt at humor to open this column.

**Marriages:** Constance Sullivan of Brockton, Mass., and a graduate of Boston University, was married to Ken Bohlin back last September 9 in Brockton. According to the newspaper clipping, since graduation Ken has served as a naval officer with the Bureau of Ordnance in Washington, D. C., and most recently as an engineer with the General Electric Company. Charley Carter is listed as one of the ushers at the wedding. On June 30, 1956, Janet Seely of Wellesley Hills, and a graduate of Vermont Junior College, was married to Bob Boole in Newton Lower Falls. The only additional information given is that the Booles are now living in South Sudbury, Mass.

A resident of Groton, Conn., and a graduate of Mitchell Junior College and the Katharine Gibbs School, Shirley McKay was wed to John Brion on June 30 in Poquonock Bridge, Conn. John received his degree as a marine mechanical engineer from Tech last September, and is president and chairman of the board of the General Munitions Corporation of Massachusetts. Martha Hoge of Summit, N. J., and a graduate of Smith College, was married to Howard Briscoe in Summit on October 14. Howard is at present a research engineer for the M.I.T. Lincoln Laboratory and has, since 1952, also received his S.M. from Tech. Suzanne Dewey, another graduate of the Katharine Gibbs School and former resident of Hartford, Conn., was married to Jerry Pickett on April 16 in Hartford. All that is known about the Picketts at present is that they are living on Chestnut Hill, West Newton, while Jerry is associated with a Cambridge company. The chapel at M.I.T. was the scene of the marriage of Rhoda Hiatt to Stanley Gelles on June 17. Rhoda is a former resident of Worcester and a graduate of Simmons College. Stan is still at Tech, but is now working for his doctorate in metallurgy. The Gelleses are now residents of Weston, Mass.

On July 8 in West Quincy, Mass., Marion Safford of Bridgeport, Conn., and a graduate of Skidmore College, was married to Vince LoCicero. The LoCiceross are now living in Shreveport, La., where Vince is working for the Sperry Gyroscope Field Engineering Company. In West-



bury, Long Island, on October 14, Mary Gregory of North Hills, Long Island, and a graduate of Douglass College, was wed to Dick McCall. According to the newspaper clipping, Dick just recently completed his work for a Ph.D. degree. September 8, Springfield, Mass., was the scene of the wedding of Lucille Gwinner of Easthampton, Mass., a graduate of the Springfield Hospital School of Nursing, and Bill Metcalf. Bill is now attending Purdue University, majoring in electrical engineering.

Another nurse, Ann Beth Rose, a graduate of the Union Hospital School of Nursing in Fall River, Mass., was married to Bob Moore on September 22. Bob is now an engineer with the Underwater Ordnance Laboratory in Newport, R. I. June Paulson of Ridgewood, N. J., and Wellesley College, was married to Mike Nacey in Ridgewood on September 23. Mike is at present an engineer with the General Radio Company in Cambridge, and is also studying law at Boston University. Ann Brittain, of Arlington and Lesley Teachers' College, was married to Allen Pipkin on June 3. The Pipkins are now living in Providence, R. I., where Allen is a student at Brown University Graduate School.

Last on the "just married" list is our indefatigable Class Agent, Stan Sydney himself. The girl is Sheila Goldner, of White Plains, N. Y., and Simmons College; the date, December 22; the place, White Plains. The Sydneys are making a flying trip through California, Nevada, and Colorado for three weeks as their honeymoon. Stan is working for the Beacon Construction Company and is in the process of completing a home-building job at Fort Devens, Mass.

Speaking of construction, I'd like to correct an error I've been perpetuating in this column about Herb Eisenberg. He is *not* working for his brother, or at least hasn't been for the last ten months. He is working for his Dad and is also a student again, going for his bachelor's in architecture at M.I.T. Charley (not "Chuck") Beaudette is no longer working for Electronics Corporation of America. He is with a group of engineers who have just gone into business for themselves converting analog data into a form capable of being processed by digital computing devices.

Other people seen lately have been Al Kandel, happily settled on Long Island with his wife, Fran, and daughter Wendy. Al is working with the Mergenthaler Linotype Company in Brooklyn, N. Y. Bob and Nancy Lurie will soon be able to announce an addition to the Lurie clan. Dana Ferguson and Bob Meuser are busily working on New York Alumni club activities. Incidentally, for any and all of you ever in New York City, make sure to drop in on the club in the Hotel Chat-ham on about 47th Street and Vanderbilt Avenue (between Madison and Park Avenues). Very fine bar. Gus Rath is wandering about the Boston area. John Fitch is handling publicity for the Boston Mid-winter Alumni meeting. Hal Lawrence is now in Washington as an assistant to one of Dr. Killian's committees doing work for the President.

Chuck Lockerby and his wife had a six

pound, 13 ounce boy, named Michael Joe, on November 20, 1956. Martha Allen of East Greenwich, R. I., and Green Mountain Junior College, and Bo New-comer were engaged last June. At that time Bo was a naval aviator on the staff of Commander Carrier Division 18 as a lieutenant (j.g.).

Latest on the reunion doings. John Ward is in charge of searching out regional chairmen to help whip up spirit for the reunion. Jack Baumann is handling arrangements in the Boston area. Sandy Isaacs has hornswoggled a hotel-keeper into getting us a wonderful deal for the weekend. Herb Eisenberg is in charge of gimmicks. Charley Beaudette and John Fitch are handling the publicity. Nick Melissas is overseeing all and doing a major portion of the work. Bob Briber is writing the letters. Stan Sydney is handling our money (or I should say what money we hope to get). Your faithful secretary is along to provide his genial presence.

It's about sack-time here in Wellesley. I'll be back next month—I have some news left over for then. It's not more than six months old this time. —STANLEY I. BUCHIN, *Secretary*, 31 Oakdale Avenue, Wellesley 93, Mass.

## 1954

There is a very noticeable reversal of form taking place as far as Class news is concerned. I am getting fewer reports on people going into the Armed Forces, and more on people re-emerging into the blessed civilian life. Bob Anslow writes from Boston that Lou Bogar has not only been discharged from the Army, but has also gotten himself married. Lou is back at Tech at the present. Bob also reports that Larry Holmes expects to return to Harvard after he leaves the Air Force later this year. Bob himself is engaged to Carolyn-Clare Simpkinson of Cincinnati, and plans to be married in April. He is assistant to the vice-president for engineering at Raytheon Manufacturing Company in Boston.

Paul Valerio writes that the Army finally caught up with him, after he had enjoyed a four-month honeymoon in Hollywood. Well, that's the way it goes. Paul also sends along word that Marty Raab is honeymooning in Germany, courtesy of Uncle Sam. Ed Hofstetter and his wife are also in Germany, with Ed studying on a Fulbright Scholarship. John Zarcaro is flying jets for the Navy down in Texas. Paul's final report is on Sooren Soovajian, who has parted company with the Army and is now working for International Business Machines in Saugerties, N. Y. Our President (and most faithful reporter), Dean Jacoby, announces with joy that he is out of the Air Force and preparing to face the world. Dean comes up with the news that George Perry was married to Jean Marion West last September 9 in Cambridge, Mass. George is still stationed at Wright-Patterson Air Force Base in Ohio, and is taking a few courses at Ohio State University in his spare time. Coley Bresee is also sneaking in a little schooling while helping defend the country out in California. Ron and Sally MacKay have settled down in domestic tranquility

in Alexandria, Va., close by Warren and Jeanne Davis. Ron and Warren are currently operating out of Fort Belvoir.

Other items from sundry sources include the news that Pete Bishop, Mort Davis, John McGrew, Bill McTigue, Alex Dreyfoos, and Art Evans have all received discharges from their respective branches of the service. Pete is now with the General Radio Company in Cambridge, Mass. I don't know what the others are doing with their new-found freedom, but Mort is in the Bronx, N. Y., John is in East Syracuse, N. Y., Bill is in Downs-ville, N. Y., Alex is in Port Chester, N. Y., and Art, always the individualist, has forsaken New York for Pittsburgh. Pete Cunavelis is working for Shell Oil Company in Syracuse, N. Y. Bill Hartrick is with the Army in Germany. Clare Leiby has popped up in the Electrical Engineering Research Lab at the University of Illinois. Carl Alsen is at White Sands Proving Grounds in New Mexico with the Army. Stan Hoff, also with the Army, was last seen hurrying across the Pacific. Don Marshall is earning his board and keep with the Bear Creek Mining Company in Denver. And Fred Zappala finally talked his way out of the Army, and at last report was resting comfortably in Brighton, Mass.

That brings us to the end of the line for this month. Let me hear from you, kiddies, or I'll have to start making up news about you. —EDWIN G. EIGEL, JR., *Secretary*, 3654 Flora Place, St. Louis 10, Mo.

## 1955

There has been a noticeable dearth of news in the last few weeks, except for the mysterious change of address slips which we get periodically. Judging from those about a fifth of the Class has moved at least once! Why, you people? The major trend seems to be in the direction of California, but in particular, Hollywood—sort of interesting, don't you think?

Chan Stevens finally reported in with a magnificent letter from Birmingham, England. He claimed it was so cold that he was typing with mittens on, but the typing wasn't really *that* bad. He had many interesting comments to make on the socialistic structure of Sweden, which he visited en route to England, and on life and people in Sweden and England. Though he feels that the United States universities are superior to those in England, he seems to be learning enough outside the classroom to justify his "study" and to fulfill the purpose of Rotary International of furthering international understanding. Dave and Toby Brooks finally revealed their new location. They are in Grand Junction, Colo., where Dave is working for the U. S. Geological Survey. Cora and Olaf Stackelberg are now in Frederick, Md., where Olaf is serving in the meteorology branch at Fort Detrick. Cora is hoping to work on electrical instrumentation—that's the Course VI spirit. Bill Neff has settled down for the next couple of years at Kirtland Air Force Base near Albuquerque, N. M., where he is a project officer with an atomic testing group. He claims that he is running his own house; i.e., a basement room, and

that he is determined to learn to cook, and that life in general is pretty good.

Got a very nice letter from Jacques Linder just prior to his departure for Burtonwood Royal Air Force Station near Manchester, England, with his newly-acquired wife. The story of their introduction is priceless. The present Mrs. Linder accompanied a friend of hers (who was engaged to Jacques' housemate at Warner Robins) to Georgia for a visit last March. Jacques was duly appointed to keep the friend "occupied," and in September, he made this occupation business a full-time job! Joan is from Binghamton, N. Y., and graduated in the Class of 1956 from Elmira College as an economics major. Jacques reported that El Erlich was at Aberdeen Proving Grounds for six months and would be getting out in December. Dean Yeilon was a project officer at San Antonio and, last time we heard, had been transferred to Wright-Patterson, and was looking forward to several weeks in the Pacific. Bob Millard is a project officer at Memphis Air Force Base.

That's about all for this time around. Hope to hear from you soon. — DELL LANIER, *Secretary*, 54 W. 71 Street, New York 23, N. Y. L. DENNIS SHAPIRO, *Assistant Secretary*, 1039 Massachusetts Avenue, Cambridge 38, Mass.

## 1956

The time between these articles rushes by and I find the deadline looming dead ahead on the horizon. This has been an eventful month and was opened by the arrival of a pair of file drawers enclosing

the wandering flock. It will now be easier to follow you on your journeys, but your letters are gratefully welcome.

Information about the Institute this fall seems to have centered on the freshman class, which the Admissions Office heralds as the best ever. With all due modesty I protest in the name of my Class. The number of students at Tech this fall probably makes classes on the Great Court no longer a novelty but a necessity. Along with the new class there are extensive changes occurring in Burton House. The former 420 Lounge is becoming a dining hall, with compulsory commons in view for future residents but probably not under Administration control.

In reflections on our Class I find one encouraging note for the freshmen. Our Class seems to have found some time to depart from the rigors of science and partake in humanities since such a large portion are marrying New England girls. New entrants in this group are Paul Lockett, III, who wed Caroline Foisie of Milton last October. John Stelling, now lieutenant of the United States Army, wed Valerie Clair of Waban in December. Frank Berryman, to take exception, wed Nancy Countryman of Dixon, Ill., in December, but she attended school in Boston. The strains of that immortal melody from Tech Show returned when I received the clipping of Margolia Cohen's marriage to Lloyd Gilson in September. Ah yes, "Mother Was a Tech Coed."

Judith Gorenstein has enrolled in the Tufts School of Medicine, and Fred Jeli-

nek is back at M.I.T. for graduate work. Among the more sensational news of Tech was the fire in the Physical Chemistry Research Laboratory. This was caused by the storage of volatile liquids in a refrigerator.

I hope that those of you who read The Review are encouraging some of our black sheep to subscribe on their own instead of peering over your shoulder. After all, it does not cost a pint of blood or a month's pay. Most of us have received the *Alumni Newsletter*, and those of you lucky enough to be in range will find that local Alumni clubs are full of information. In planning ahead it is hoped that many of you will include Alumni Day in your plans for June. Continuing into our future I find Oliver Wendell Holmes' comparison of life after graduation to a horse race very apropos.

Rambling around the newspapers there was found, with great pleasure, a critique of Elvis Presley's movie in the *New York Times*. The article, among other things, was adorned with the title "Culture Takes a Holiday," and compared the movie to a horse opera with the heavens. To those literary minds in our midst, it appears that this is a season to feast on the bones of the Civil War.

In review, this article looks to be one of my saner works, which is something I will be unable to guarantee for the future. Happy Valentine's Day, Loverboyniks, and remember that Leap Year is over. — BRUCE B. BREDEHOFT, *Secretary*, 1528 Dial Court, Springfield, Ill. M. PHILLIP BRYDEN, *Assistant Secretary*, Box 37, West Topsham, Vt.

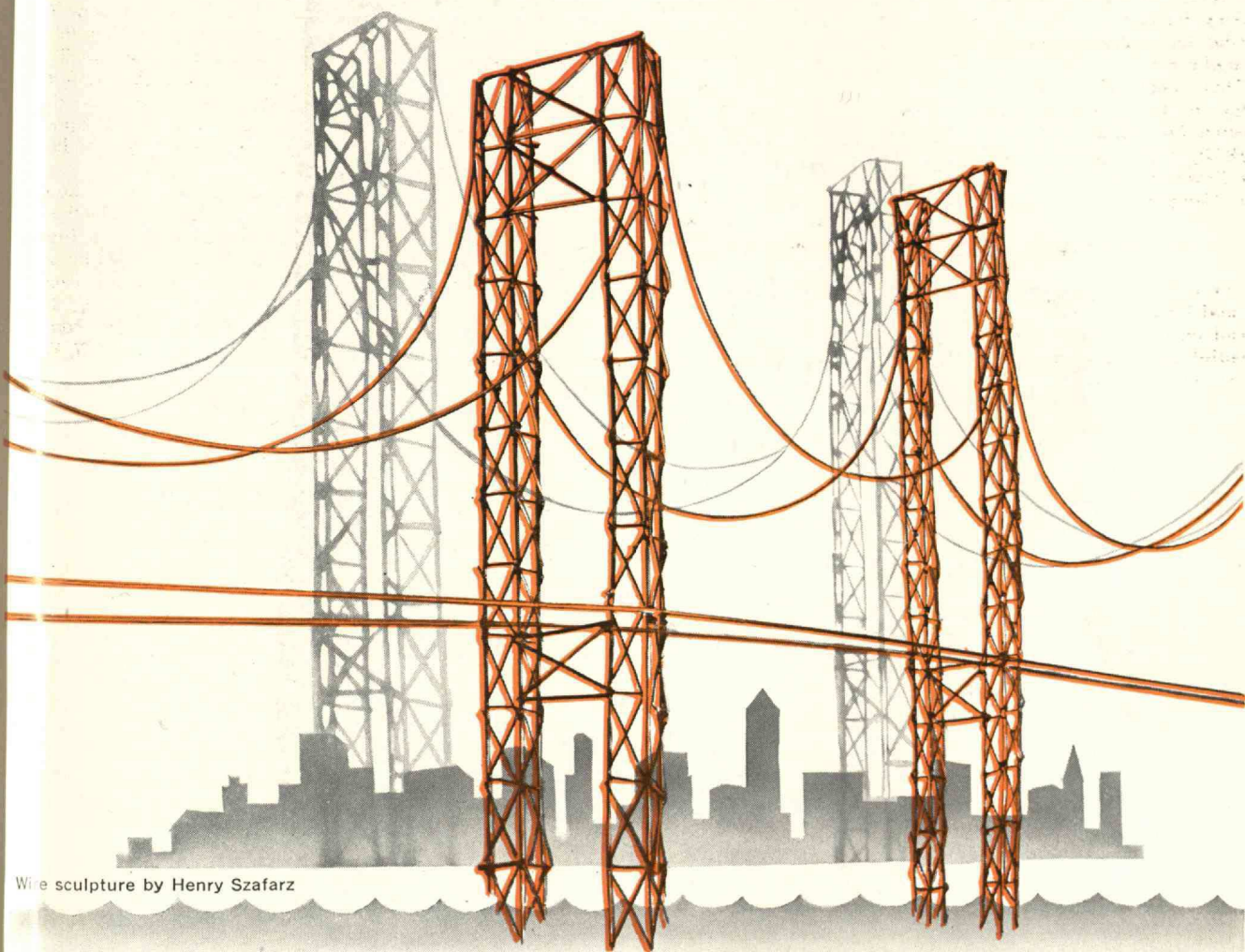


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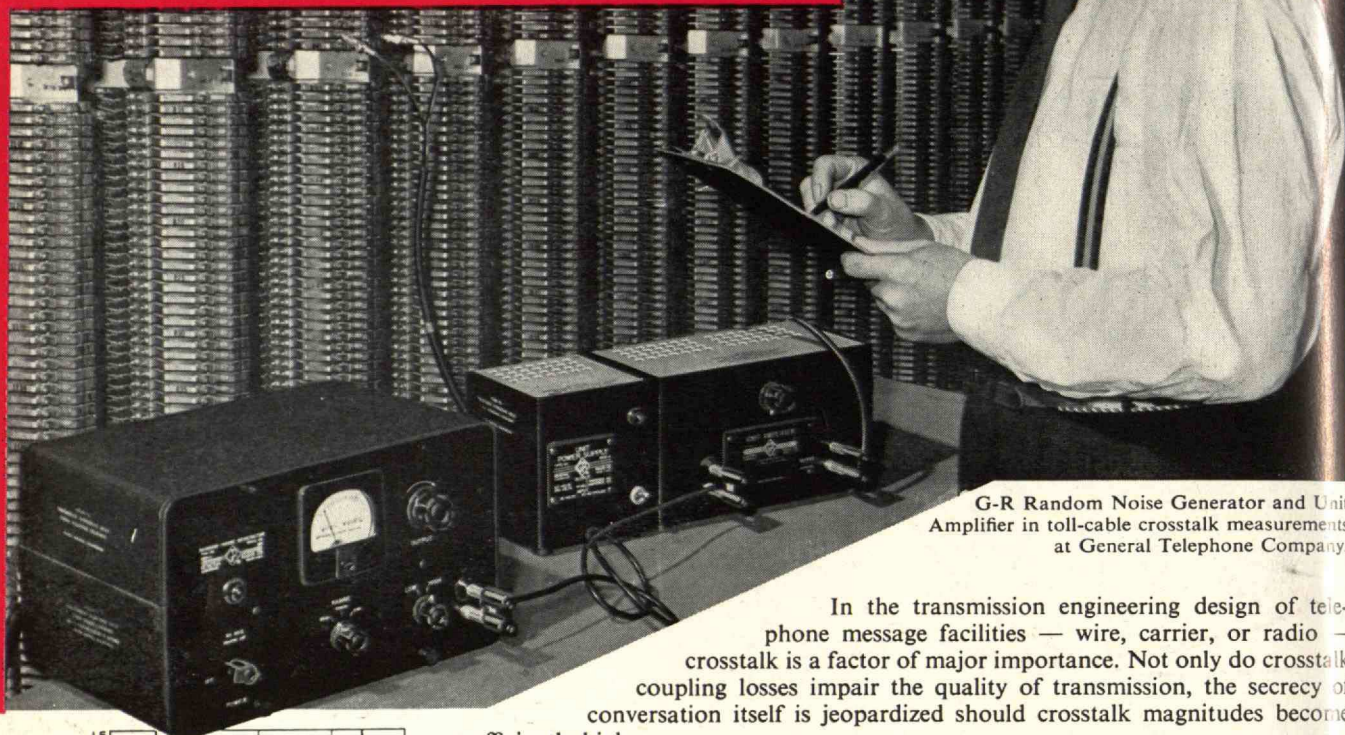
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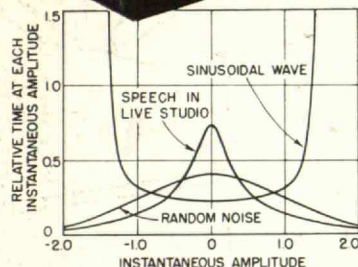
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